Integrating Neuroscience into Counselling Psychology: Exploring the Views and Experiences of UK Based Counselling Psychologists

A thesis submitted to the University of Manchester for the degree of Doctorate in Counselling Psychology (DCounsPsych) in the Faculty of Humanities

2016

David Goss

School of Environment, Education and Development
Contents

Chapter 1: Introduction................................................................. 9
1.1 Background and introduction to the study............................... 9
1.2 A note on wording – definitions............................................. 10
1.3 Openness and reflexivity – my personal interest...................... 14
1.4 Structure of the thesis............................................................ 14

Chapter 2: Literature................................................................. 16
2.1 Introduction............................................................................. 16
2.2 Historical context of neuroscience and psychotherapy................ 16
2.3 The benefits of integration..................................................... 19
2.4 The challenges to integration.................................................. 25
2.5 Integrating neuroscience into counselling psychology – what does the literature say so far?.................................................. 28
  2.5.1 Literature from the USA..................................................... 29
  2.5.2 Literature from the UK....................................................... 35
  2.5.3 What we can take from the existing literature...................... 39
2.6 Aims and rationale for the study............................................. 40
  2.6.1 Why counselling psychology?............................................ 40
  2.6.2 Why the UK?................................................................. 43
2.7 Contribution to knowledge..................................................... 43
2.8 Chapter summary................................................................... 43

Chapter 3: Methodology............................................................. 45
3.1 Introduction............................................................................. 45
3.2 Research questions.............................................................. 45
3.3 Qualitative or quantitative?.................................................... 46
3.4 Epistemology and method..................................................... 47
  3.4.1 Phenomenology............................................................... 47
  3.4.2 Hermeneutics................................................................. 50
  3.4.3 Idiography................................................................. 51
  3.4.4 So, what is IPA?............................................................. 52
  3.4.5 Buddhism................................................................. 53
Chapter 5: Discussion and Conclusion................................................................. 140
5.1 Introduction................................................................................................. 140
5.2 Responding to the research questions ...................................................... 140
  5.2.1 Responding to the secondary research questions ................................ 141
  5.2.2 Responding to the primary research question...................................... 149
5.3 Applying a hermeneutic of suspicion ....................................................... 152
5.4 Critique of the study – Strengths and limitations ...................................... 158
5.5 Implications for counselling psychology .................................................. 166
5.6 Suggestions for future research ............................................................... 168
5.7 Reflexive summary .................................................................................... 170

References............................................................................................................ 175

Appendices........................................................................................................... 192
Appendix A – Participant advertisement sheet................................................. 192
Appendix B – Participant advertisement for national e-letter and website forum... 193
Appendix C – Recruitment email example....................................................... 194
Appendix D – Participant information sheet.................................................... 195
Appendix E – Participant consent form............................................................ 197
Appendix F – Ethical approval confirmation...................................................... 198
Appendix G – Working with a transcript.......................................................... 199

List of tables
Table 1 – Method of interviewing format......................................................... 61
Table 2 – Summary of master themes............................................................... 86
Table 3 – The dangers of neuroscience............................................................ 87
Table 4 – Defining neuroscience...................................................................... 95
Table 5 – There are ways that neuroscience can help us................................. 100
Table 6 – Methods of learning and the need for training.................................. 107
Table 7 – Integration: The opposition and the need – finding the balance........ 114
Table 8 – My practitioner identity................................................................... 120
List of figures
Figure 1 – Flowchart of analysis process..........................................................63
Figure 2 – Extract from Rachel’s transcript demonstrating my question choice......72
Figure 3 – Transcript extract from Erin’s interview to demonstrate sense
making..............................................................................................................75
Figure 4 – Transcript extract from Liam’s interview to demonstrate potential
agenda..............................................................................................................76
Figure 5 – Transcript extract from Liam’s interview to demonstrate his
knowledge sharing confidence.........................................................................77
Figure 6 – Transcript extract from Erin’s interview to demonstrate her
reluctance in discussing neuroscience..........................................................78

Word Count: 52, 868
Integrating Neuroscience into Counselling Psychology: Exploring the Views and Experiences of UK Based Counselling Psychologists

David Goss
2016
The University of Manchester
Doctorate in Counselling Psychology

Abstract

Background: The last few decades have seen neuroscience rapidly progress as a discipline. Development of research techniques such as neuroimaging have been utilised to increase an understanding of our species. Counselling psychologists are trained to combine the world of humanistic and phenomenological philosophies with an ability to understand and undertake psychological research, leading to interventions which are theoretically and subjectively informed. This work is undertaken through the reflexive and scientist-practitioner models which underpin the identity of the discipline. As such, counselling psychologists would seem ideally placed to integrate neuroscience into their work, utilising their reflective and scientist practitioner identities to both utilise and add to neuroscience research, helping to increase the understanding and efficacy of interventions for our species’ mental health. However, it appears to be unknown as to whether this is something that counselling psychologists want, particularly in the UK.

Aims and Method: The aim of this research was to explore UK based counselling psychologists’ views and experiences of integrating neuroscience into their work. An interpretive phenomenological analysis (IPA) was undertaken. Six participants were recruited into three different groups of interest/understanding in integrating neuroscience into counselling psychology. One hour semi-structured interviews were carried out with each participant to explore their views and experiences relating to the paradigm.

Findings and Discussion: Six master themes emerged from the analysis; ‘The Dangers of neuroscience’, ‘Defining neuroscience’, ‘There are ways that neuroscience can help us’, ‘Methods of learning and the need for training’, ‘Integration: The opposition and the need – finding the balance’, and ‘My practitioner identity’. The themes presented various advantages, dangers and challenges to integration, some of which aligned with existing literature and some of which presented new thoughts and feelings on the paradigm.

Conclusion: The six master themes highlighted that participants indicated an overall view that UK counselling psychologists are currently integrating neuroscience into their work, utilising neuroscience theory as a way to develop their understanding of clients, as well as to communicate with clients and multi-disciplinary colleagues. Participants provided a number of experiential advantages of integration and indicated that they want to integrate even more with neuroscience, incorporating neuroscience into doctorate and CPD training, though they acknowledged the importance of balanced integration.

Key Words: counselling psychology, neuroscience, integration, interpretive phenomenological analysis
Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

Copyright statement

(i) The author of this thesis (including any appendices and/or schedules to this thesis) owns certain copyright or related rights in it (the “Copyright”) and s/he has given The University of Manchester certain rights to use such Copyright, including for administrative purposes.

(ii) Copies of this thesis, either in full or in extracts and whether in hard or electronic copy, may be made only in accordance with the Copyright, Designs and Patents Act 1988 (as amended) and regulations issued under it or, where appropriate, in accordance with licensing agreements which the University has from time to time. This page must form part of any such copies made.

(iii) The ownership of certain Copyright, patents, designs, trademarks and other intellectual property (the “Intellectual Property”) and any reproductions of copyright works in the thesis, for example graphs and tables (“Reproductions”), which may be described in this thesis, may not be owned by the author and may be owned by third parties. Such Intellectual Property and Reproductions cannot and must not be made available for use without the prior written permission of the owner(s) of the relevant Intellectual Property and/or Reproductions.

(iv) Further information on the conditions under which disclosure, publication and commercialisation of this thesis, the Copyright and any Intellectual Property and/or Reproductions described in it may take place is available in the University IP Policy (see http://documents.manchester.ac.uk/DocuInfo.aspx?DocID=487), in any relevant Thesis restriction declarations deposited in the University Library, The University Library’s regulations (see http://www.manchester.ac.uk/library/aboutus/regulations) and in The University’s policy on Presentation of Theses.
Acknowledgements

I would like to extend thanks to my primary supervisor Dr Terry Hanley for his invaluable advice and guidance, both through my thesis and the course as a whole. I would like to thank my second supervisor Dr Tony Parnell for his review and guidance in helping me prepare the final submission as well as his support throughout my studies, particularly in relation to clinical placements. I would also like to thank Dr Laura Winter for her guidance and support throughout the course.

I would like to thank each of the participants who took part in my research; they are the leading stars of this work.

Without doubt, the main thank you is to my parents, without whom I would not have been able to travel what has been a wonderful road. Thank you for all the sacrifice and support you have continued to show me throughout my life.
1. Introduction

1.1. Background and introduction to the study

The aim of this research is to explore United Kingdom (UK) based counselling psychologists’ understanding, experiences, and views on incorporating neuroscience into counselling psychology.

With the advent of advanced modern neuroimaging techniques (see Carter & Shieh, 2010) and continually developing models of human biological understanding, we are well and truly into a golden age of neuroscience. There are increasing numbers of psychotherapeutic publications which highlight ways in which a neurobiological knowledge can be utilised within psychotherapy (e.g., Cozolino, 2010; McHenry, Sikorski, & McHenry, 2014). Further to the literature, there are societies and groups developing around the world, geared towards integrating the fields of neuroscience and psychotherapy (e.g., see http://www.neuropsychotherapist.com and http://www.neuropsa.org.uk). As a trainee counselling psychologist, I am interested as to how integration between neuroscience and counselling psychology has progressed, particularly in the UK.

Like all psychological disciplines, counselling psychology holds a range of philosophical underpinnings and values which provide it with an identity. One of the main underpinnings of counselling psychology is the importance it places on valuing the holistic, inner subjective world of individuals (Woolfe, Strawbridge, Douglas, & Dryden, 2010). The integrative and pluralistic (Cooper & Mcleod, 2011) approaches of counselling psychology could be well placed in helping to develop and deliver neurologically benefitting therapies, however the name of counselling psychology does not seem to widely figure in research literature to date. Of what literature does exist on the paradigm, the majority seems to stem from the United States of America (USA). Therefore it would appear that as of yet, counselling psychology, especially in the UK, has not had an opportunity to integrate its individual viewpoints and philosophies with the field of neuroscience. This suggests that a potential rich tapestry of both therapeutic and research benefit is yet to be harnessed within each individual discipline of counselling psychology and
neuroscience. But the question remains as to whether it is something which counselling psychologists want? As such, my primary research question is;

1. How do UK based counselling psychologists view integrating neuroscience into counselling psychology?

Within this primary question are two secondary subsidiary research questions;

2. What are UK based counselling psychologists’ understandings of neuroscience?
3. What do UK based counselling psychologists perceive as the advantages, disadvantages, and challenges of integrating neuroscience into counselling psychology?

1.2. A note on wording – definitions

**Neuroscience into counselling psychology**

I have used the phrase ‘neuroscience into counselling psychology’ within my research title and question. Although the words ‘integrating neuroscience and counselling psychology’ would suffice and at times, my discussions within this work will relate to a mutual two-way integration between neuroscience and counselling psychology, for the present work, my formal line of investigation is concerned with how counselling psychologists view integrating neuroscience into their discipline. The reason for this is, given that I am a trainee counselling psychologist and all of my participants will be qualified counselling psychologists, the perception of integrating the two disciplines of neuroscience and counselling psychology is discussed from a particular angle, i.e., a counselling psychologist point of view. Therefore, the investigation is specifically about integrating neuroscience into counselling psychology.

**Counselling psychology, counselling, psychotherapy…**

This is a vital parameter to distinguish. As a trainee counselling psychologist, I am familiar with how different colleagues and professionals refer to my job title across work settings. Some people may call me a psychologist, a counsellor, a therapist, a psychotherapist and on the seemingly rarest of days, a counselling psychologist.
Investigating the varying identity and occupational titles of a counselling psychologist is something which could merit its own thesis. In the present work, it is important to note that I am interested in investigating the integration of neuroscience into counselling psychology in particular.

Counselling and psychotherapy

I find that people can be unsure on what, how, or if the terms counselling and psychotherapy differ. Based on the number of information sources which suggest that the two terms are interchangeable, including that of the British Association for Counselling and Psychotherapy (BACP) which confirms that it does not distinguish between what it sees as two umbrella terms for talking therapy (British Association for Counselling and Psychotherapy, n.d), the present work will use the two terms interchangeably.

What is counselling psychology?

In Britain, psychotherapy and counselling developed outside of and separate to psychology; counselling psychology is seen as a connection between the humanistic and relational world of counselling and the behavioural science world of psychology (Woolfe et al., 2010). Fundamental to the identity of counselling psychology is an emphasis on working with the lived, subjective worlds of clients. Counselling psychology places an importance on practitioners having a reflective self-understanding, as they traverse through a client’s difficulties in a collaborative, relational way of working (Woolfe et al., 2010). It is based on humanistic values and seeks to work with the client, as opposed to treating the patient in a medical mindset. The scientist-practitioner model is also another key part of counselling psychology’s identity and training. It is the emphasis in training on integrating psychological research and theory (past and present) into practice, which is perhaps one of the key differences between counselling psychology and counselling (psychotherapy). In the USA, it has been suggested that there is a:

basic expectation…that counseling psychologists will be able to apply the results of research and scholarship to their practice, think critically and scientifically about their work, and make original research and scholarship
contributions. Contemporarily, the science component has also been very broadly interpreted to include alternate research paradigms including qualitative approaches, case studies, and original scholarly contributions. (Munley, Duncan, Mcdonnell, & Sauer, 2004, p.262)

However, it should be noted that the focus of this work is on UK based counselling psychologists. Counselling psychology was initially founded in the 1950’s within the USA and has undergone generations of development and maturation as a discipline (Munley et al., 2004). Within the UK, counselling psychology is a much younger discipline and has only really developed in the last 20 years with the creation of a British Psychological Society (BPS) professional division in 1994. As counselling psychology has branched out of the USA into other countries, the individual cultures and frameworks of those countries have laid influence upon the foundations of the discipline. As such, a UK working definition from the BPS is useful, to set the framework for which the present work will approach the profession of counselling psychology:

Counselling psychologists focus on working with a tailored psychological formulation to improve psychological functioning and well-being, working collaboratively with people across a diverse range of disciplines. [They] deal with a wide range of mental health problems concerning life issues including bereavement, domestic violence, sexual abuse, traumas and relationship issues. They understand diagnosis and the medical context to mental health problems and work with the individual’s unique subjective psychological experience to empower their recovery and alleviate distress. Counselling psychologists are a relatively new breed of professional applied psychologists concerned with the integration of psychological theory and research with therapeutic practice. The practice of counselling psychology requires a high level of self-awareness and competence in relating the skills and knowledge of personal and interpersonal dynamics to the therapeutic context. (British Psychological Society, n.d.)

The identity of counselling psychology is another item which is often subject to its own scholarly discussion. The key factor to note in this work is that counselling psychology holds its own values and beliefs which distinguish it from counselling,
psychotherapy, and other forms of psychology (including clinical). That is why the present work is focused specifically on integrating neuroscience into counselling psychology.

**What is neuroscience?**

Neuroscience is the study of the nervous system, viewed as an interdisciplinary science incorporating knowledge from disciplines including psychology, medicine, philosophy, physics, computer science, and biology (Ivey, D’Andrea, & Ivey, 2012). The primary focus of investigation is geared towards the central nervous system, compromising of the spinal cord and brain (Bear, Connors, & Paradiso, 2007). The basic unit of the central nervous system is the neuron; these are specialised cells which allow the brain to communicate and operate through the reception, conduction, and transmission of electrochemical signals; as electrical signals are conducted between neurons, a pathway is generally opened for the transfer of neurotransmitters and neuropeptides across synapses (small gap junctions between adjacent neurons) (Pinel, 2011). These neurotransmitters (e.g., dopamine, serotonin, epinephrine, and norepinephrine) and neuropeptides (e.g., endogenous opioids) carry messages between neurons which generate biological reactions; these biological chemical reactions are what contribute to the various cognitive, behavioural, psychological, and emotional outcomes and actions which people experience and exhibit as part of their everyday lives (Ivey et al., 2012).

There are a vast range of disciplines within neuroscience including affective, cognitive, behavioural, social, cellular, and molecular (for additional branches see Brain Technology and Neuroscience Research Centre, n.d.; Squire, 2013).

**Distinguishing neuroscience and neuropsychology**

I see a distinction between neuropsychology and neuroscience. Neuropsychology generally involves working with a neurological client population, often with a keen emphasis on the assessment of cognitive functioning. This somewhat differs from the present research inquiry into neuroscience, a general branch of scientific enquiry, which can be related to all research and client populations.
1.3. Openness and reflexivity – my personal interest

I am passionate about counselling psychology and neuroscience in equal proportion. I see the integration of the two subjects as a positive step for both disciplines. I have always felt that the humanistic and subjective approach of counselling psychology was the right place for me to work. However, a previous degree in engineering and a number of years working as a project manager in construction suggests there is an innate enjoyment of processes and systems within me. During my MSc in psychology, I studied a module on biological psychology and I was encapsulated by the systems and processes in operation within living organisms. I began reading neuroscientific books such as Damasio’s (2011) work on constructing consciousness and Panksepp and Biven’s (2012) work on affective neuroscience, and I felt so much of the information could be used interchangeably with the counselling training I had begun undertaking a year or two earlier. I believe that the objective and positivistic information gained from a neuroscientific investigation on the brain and mind can be enhanced, complemented, and used alongside the subjective and often qualitative domain of counselling psychology, to continually increase an understanding of our species. Given my passion for the integration of the two disciplines, I felt it would be useful for me to understand what my fellow counselling psychology colleagues feel about the paradigm. There is a noticeable shortage of literature discussing the integration of neuroscience and counselling psychology, therefore my aim is to investigate why that is. I shall speak further in Chapter 3 on my interest in this paradigm, particularly in relation to how it was crucial that I was open and aware of my viewpoint so as to not let it biased the research, particularly in my data collection and analysis.

1.4. Structure of the thesis

In this section, I have initially introduced the primary and secondary research questions under investigation as well as provided some background context to the study. In chapter 2 I have undertaken a literature review, first discussing research on the integration of neuroscience and psychotherapy, before focusing in on literature specific to integrating neuroscience into counselling psychology. At the end of that chapter, I have provided a rationale for the present study. In chapter 3 I discuss my research method, interpretive phenomenological analysis (IPA). I provide an
explanation as to why I chose this method of investigation and how I have carried it out. In chapter 4 I present my findings; this involves a presentation of the master themes elicited from my interpretive phenomenological analysis, with extract quotations from participants used, to help illustrate these themes. I also discuss how my findings converge and diverge with existing literature. In chapter 5 I relate the findings to my research questions, as well as highlighting implications, limitations, and future directions of the research. I conclude with a reflexive summary of my research process.
2. Literature

2.1. Introduction

The aim of this chapter is to review what current literature tells us about the integration of neuroscience into counselling psychology. I will first provide an overview of literature discussing the benefits and challenges of integrating neuroscience into psychotherapy; however, this is not an exhaustive review as the aim is to merely provide an introductory overview of publications on this topic. I then move on to a more exhaustive systemic review of literature discussing the integration of neuroscience into counselling psychology in particular. Following the review of literature, I provide a rationale as to why my research question is aimed at integrating neuroscience into UK based counselling psychology.

2.2. Historical context of neuroscience and psychotherapy

The focus of this work is on counselling psychology as opposed to counselling and psychotherapy. However, given the overlap between the clinical therapeutic role of a counselling psychologist and a counsellor or psychotherapist, I feel it would be somewhat remiss of me to ignore the literature pertaining to what has been termed neuropsychotherapy.

It all goes back to Freud

Sigmund Freud was initially trained as a neurologist, but decided that the technologies of his time would not permit him to ably investigate the neural correlates of the mind; therefore, he abandoned his ‘project for a scientific psychology’ (Freud, 1895/1950). As such, Freud focused his work on using the qualitative subjective experiences of his clients to help underpin his framework of psychoanalysis (Fotopoulou, Pfaff, & Conway, 2012). Psychoanalysis developed and further models of counselling and psychotherapy emerged, including the humanistic person centred work of Rogers (1957/1992), behaviourism, and the ever expanding model of cognitive behavioural therapy (CBT) (Ellis, 1957, 1962; Beck, 1967). Psychoanalysis itself has evolved into what is now termed psychodynamic psychotherapy, a mode of therapy which utilises the majority of principles and
theories laid out by Freud, but often working in a shorter time frame with more infrequent sessions (Shedler, 2010; British Psychoanalytic Council, n.d.). The key point for the present work is that in the last two decades or so, neuroscience and its associated technologies has developed at a rapid pace and as such, it is now able to provide the kind of neural information that Sigmund Freud wished for all those years ago, allowing us to begin developing a truly integrative understanding of our species’ brain and mind (Fotopoulou et al., 2012; McHenry et al., 2014).

**Fields of the paradigm**

The integration of neuroscience and psychotherapy commonly falls under a number of different terms. Perhaps the most common is *neuropsychotherapy*:

> Neuropsychotherapy is a meta-framework taking into account the dynamic interplay between the mind, body, society, and environment upon well-being. By understanding the mechanisms of our biology/neurology, the processes of our psychology, and the influences of social interaction, it is believed a holistic therapeutic practice can be formulated (neuropsychotherapist, n.d.)

The term was deemed to be coined by Klaus Grawe (2007) and remains in use in a wide range of books (e.g., Cozolino, 2010) and journal articles (e.g., Walter, Berger, & Schnell, 2009).

A second term related to the paradigm is *interpersonal neurobiology*. Interpersonal neurobiology is pioneered by Dan Siegel (2009), who defines the field as different branches of science and other ways of knowing coming together, to explore how research into the brain-body-mind connection illuminates the role of intersubjective states on our physiological health (Siegel, 2011). Perhaps the notable difference is that interpersonal neurobiology looks to integrate all branches of science (e.g., biology, computer science, physics, psychology etc.), not just neuroscience and psychotherapy. That being said, neuroscience is a huge part of interpersonal neurobiology (the latter half of the name perhaps evidence of this) and Siegel’s (2011) flagship theory of *mindsight* demonstrates what an intrinsic link the field has for neuroscience and psychotherapy. Given that neurobiology can be seen as a
branch of neuroscience, the term neuropsychotherapy and interpersonal neurobiology shall be seen as one of the same for the present work.

A third term for the paradigm is neuropsychoanalysis. This truly is the domain in which the full circle of Freud’s ambition to link a scientific and subjective view of the mind is trying to be realised. The term neuropsychoanalysis was first formally used in 1999 in the creation of the journal and society of neuropsychoanalysis (see www.neuropsa.org.uk) (Solms & Turnbull, 2011) as “a response to the need to reconcile psychoanalytic and neuroscientific perspectives on the mind, with the goal of yielding a better understanding of the basic emotional foundations of psychiatric disorders, in the hope of promoting better nosology and therapeutics” (Panksepp & Solms, 2011, p. 6). Neuropsychoanalysis is a worldwide society and in some ways, given the chronological development of the paradigms discussed above, it can perhaps be seen as the underpinning discipline which pioneered the paradigm of integrating neuroscience and psychotherapy. An additional field of neuroscience is now stemming from neuropsychoanalysis, known as psychodynamic neuroscience (Fotopoulou et al., 2012). However, the present work will treat this as part of neuropsychoanalysis.

There is considerable overlap in the objectives, researchers, authors, and publications across these three fields of neuropsychotherapy, interpersonal neurobiology, and neuropsychoanalysis. For example, affective neuroscientist Jaak Pankseep has authored a book as part of W.W. Norton’s series on interpersonal biology (Panksepp & Biven, 2012), is heavily discussed and used within neuropsychoanalytic publications (Zellner, Watt, Solms, & Panksepp, 2011; Fotopoulou et al., 2012), and is often discussed within neuropsychotherapy literature and media (see neuropsychotherapist, 2013). This applies to a number of other leading names within these fields. Without doubt, neuroscience is continually integrating with psychotherapy. Before looking at what sort of integration is occurring, I will first expand on one of the core reasons that this integration is developing at such a pace.
The development of neuroscience research techniques

Neuroscience as a discipline has seen rapid progression over the last couple of decades, in large part due to technological advancements improving research capabilities. Prior to the 1970’s a large proportion of neuroscience research involved the lesion method, in which lesions would be applied to animals’ brains, helping to infer how the human brain operated. Additionally, the observation of living behaviour and the brains of deceased neurological patients helped neuroscientists gain somewhat of an understanding of the human mind. However, although basic technology did exist around the mid-20th century, it was the introduction of computerised tomography (CT) scans which provided the revolution of brain imaging (Pinel, 2011). Now, a range of technologies allow us to obtain information about the brain’s structure and functioning. Single-unit recording, event-related potentials (ERPs), positron emission tomography (PET), functional magnetic resonance imaging (fMRI), electroencephalogram (EEG), magneto-encephalography (MEG), and transcranial magnetic stimulation (TMS) are some of the main neuroimaging techniques (for more details see Eysenck & Keane, 2010, p. 7-14). These technologies have led to rapid developments in neuroscience over the last couple of decades (Damasio, 2011).

2.3. The benefits of integration

Below, I highlight a number of benefits which have been identified in relation to integrating neuroscience into psychotherapy.

The ever changing brain – neuroplasticity and epigenesis

The human brain is continually restructured throughout a person’s life, in response to the environmental factors which they experience (Cozolino, 2010; Jokić-Begić, 2010). An increased understanding of the neural make-up of the brain and mind has helped develop two key findings for neuroscientists and psychotherapists alike, brain plasticity (neuroplasticity) and epigenesis. Brain plasticity relates to the brain’s ability to reproduce new neurons (neurogenesis) and create reorganisations of neural networks throughout its lifetime (Begley, 2007). Epigenesis relates to research demonstrating that although each human is born with genes which are sent straight
into production and effect, the expression (activation) of many other genes depends on a person’s environment and social experiences, which trigger the transcription of gene variations (Szyf, McGowan, & Meaney, 2008). Additionally, the birth of new neurons and synaptic connections (neurogenesis and synaptogenesis respectively) (Bjorklund & Lindwall, 2000) contribute to the continual remapping of neuron structures. It is this neuronal restructuring which is at the heart of learning and memory development (Clark & Beck, 2010). The notion of neuroplasticity is imperative when we think of all models of psychotherapy. Although evidence suggests that there are certain critical periods of learning and hardwiring for our brain, we are able to continually adapt and change our neural structures when we encounter new experiences in life (Cozolino, 2010). This is a crucial factor for counselling psychologists and psychotherapists to be aware of.

**Neuroimaging use for psychotherapy**

Advances in neuroimaging technology have proven beneficial in demonstrating the efficacy of psychotherapy. There are numerous studies which have shown through the use of neuroimaging techniques, the benefits which psychotherapy can have on a person’s brain and subsequent well-being. These studies demonstrate how psychotherapy helps to modify dysfunctional neural circuits associated with specific disorders through the mechanism of plasticity and epigenetics (Peres & Nesello, 2008). Techniques also involve comparing brain changes with self-report battery instruments (Penadés et al., 2002). Karlsson (2011) suggested that there had been (at the time of writing) 20 studies demonstrating how cognitive behaviour therapy (CBT), dialectic behaviour therapy (DBT), psychodynamic psychotherapy, and interpersonal psychotherapy affect brain function in patients suffering from a wide range of psychological issues, including depression, anxiety, and borderline personality disorder (e.g., Baxter, Jr, Schwartz, Bergman, & et al., 1992; Schwartz, Stoessel, Baxter, Martin, & Phelps, 1996; Martin, Martin, Rai, Richardson, & Royall, 2001; Paquett et al., 2003; Furmark et al., 2002; Lai, Daini, Calcagni, Bruno, & De Risio, 2007; Felmingham et al., 2007; Beutel, Stark, Pan, Silbersweig, & Dietrich, 2010). Research has continued to demonstrate the positive effect of psychotherapy through the use of neuroimaging (e.g., Penadés et al., 2013).
Neuroscience research developments for psychological theory

Additional to neuroimaging demonstrating the efficacy of therapy, there are a number of other neuroscience research methodologies which have contributed to developing an understanding of psychological processes and theory, which can be used both in and out of psychotherapy. Psychophysiological research has utilised skin conductance experiments to measure psychophysiological correlates of processes such as empathy (Oliveira-Silva & Gonçalves, 2011), event-related potentials (ERPs) have been used to examine affective modulation of semantic information processing under different moods (Pinheiro et al., 2013), and transcranial direct current stimulation (tDCS) was used to assess task switching and cognitive control (Leite, Carvalho, Fregni, Boggio, & Gonçalves, 2013). These studies are a brief example of the benefit researchers are gaining in developing psychological theories by converging methodologies including (but not limited to) lesion, electrophysiological, computational, and behavioural studies (Cacioppo, Berntson, & Nusbaum, 2008).

Informing psychotherapy with neuroscience

As well as providing evidence on the efficacy of psychotherapy and developing psychological theories, neuroscience can also be used to carry out, develop and support various psychotherapeutic interventions (Ivey et al., 2012). In the following sections, I intend to outline some brief examples of what neuroscience can offer to various psychological therapies.

Neuroscience use for person centred counselling – the relationship

One of the tenets of person centred counselling and in fact of all psychotherapy, is promoting a safe and empathic therapeutic relationship. Kosfeld, Heinrichs, Zak, Fischbache, and Fehr (2005) demonstrated the role of a neuropeptide, oxytocin, in human trust. Pleasurable experiences with an attachment figure can also enhance dopamine and endogenous opioid systems, which can improve psychological well-being. Secure therapeutic relationships help strengthen and develop neural substrates specific to attachment and emotion disorders (Panksepp & Biven, 2012). This information provides a rationale for the therapist in being present for a client,
providing the core conditions of person centred therapy (Rogers, 1957/1992), as well as demonstrating why longer term interventions may be required for those clients with maladaptive attachment schemas. As well as supporting the person centred model of therapy, the neuroscience of attachment supports the suggestion that the emotional quality of a therapeutic relationship is more important than the model of therapy used (Lambert & Barley, 2001).

Neuroscience has also provided neural evidence of empathy (Gallese, Fadiga, Fogassi, & Rizzolatti, 1996; Gallese, 2001), a core condition of person centred counselling. Armed with evidence that we each have neurons which attempt to mirror that of another person, a therapist can not only build security and support for a client by empathising with them, but they can also model emotional regulation within the therapy setting, which the client can in turn attempt to mirror. This advocates the importance of therapists continually working on understanding their own internal processes, aiding their own ability to feel and self-regulate distressing emotions which can in turn help their clients.

**Neuroscience use for cognitive behavioural therapy – psychoeducation and rationale**

Psychoeducation is often part of cognitive behavioural therapy (CBT) interventions. It helps to provide reason to the symptoms of psychological distress a client is feeling, as well provide a rationale as to why a particular intervention may work. Below, I outline a neuroscience approach to depression and anxiety, which can form part of the psychoeducation arm of CBT.

Facilitation of the brain’s opioid systems has been shown to alleviate many forms of severe depression (Bodkin, Zornberg, Lukas, & Cole, 1995). Additionally, dopamine has been shown to play an active role in motivation and drive (Panksepp, 2011a/b). Both endogenous opioids and dopamine can provide a positive feeling to clients and as such, a lack of either chemical can provide negative feelings. This information can be used by psychotherapists to identify certain causes for a client’s depression, i.e., lack of socialising, lack of motivation, or both. This can in turn
provide a rationale as to why clients may feel better if they undertake new tasks, hobbies, and social networking.

Joseph LeDoux (1994) demonstrated that humans have two fear circuits (Phelps, Delgado, Nearing, & LeDoux, 2004). The first is a fast circuit in which a stimuli (be it visual, auditory, olfactory etc.) is received by a person and passed through the thalamus to the amygdala. The amygdala assesses and responds to the stimulus based on its evolutionary and learned memory. The second circuit is slower, as the incoming stimulus passes from the thalamus to the cerebral cortex and hippocampus, prior to arriving at the amygdala for fear processing. The memory banks of the hippocampus and the cognitive appraising of the cerebral cortex provide context to the stimulus, allowing the amygdala to respond in a more appropriate fashion. This slow system is also responsible for appraising the response already made by the fast circuit, i.e., increasing the need for a fight or flight response, or, inhibiting arousal through the parasympathetic branch of the autonomic nervous system. The quick system allows us to respond to danger before it is too late, whilst the later evolving slower system allows us to provide context to our world, prevent over reactions, and develop as a species. An example of these dual systems in action takes place when we hear a car backfire. We may initially be startled and jump, ready to fight, flight, or freeze (our fast system), but then our slower system kicks in and by processing all available memory and additional stimuli, we realise it is not a gun or predator, and our body calms down. Anybody who can recall such an experience will note that even the ‘slow’ system is very quick. Clients who suffer from anxiety can often suffer from an over active (fast) amygdala system, which is in a constant state of arousal, with any environmental trigger increasing their anxiety arousal and escalating the fight, flight, or freeze system into a panic attack. Psycho-educating clients on the physiological symptoms of anxiety, particularly in relation to the norepinephrine induced fight, flight, or freeze response may help develop their prefrontal cortex appraisal system, which will help clients better intercept their anxiety responses, putting their anxiety triggers into context (Cozolino, 2010). The memory of their therapist providing them this psychoeducation in a warm, safe, and positive environment will also be added into their hippocampal memory, helping develop their slower fear circuitry. All of this is carried out through the development of new neural connections created within CBT, i.e., through neuroplasticity. CBT has been
shown to reduce the amygdala and hippocampal volumes of clients with social anxiety, which has correlated with a verbal report of reduced distress (Furmark et al., 2002).

**Neuroscience use for psychodynamic psychotherapy – supporting theory**

Cusumano and Raz (2014) discussed the use of psychoanalytical theory to help furnish a phenomenological neuroscience. Efforts have been made to develop models of the brain that help provide information on psychodynamic phenomena such as repression (Bazan and Snodgrass, 2012), dreaming (Zellner, 2013), and the dynamic unconscious (Berlin, 2011; Solms and Zellner, 2012).

Zellner (2013) highlighted that the elimination of dreams was consistent with a lesion in the default mode network (DMN), a network of brain regions generally most active when people are at rest and are engaged in spontaneous thought, daydreaming, or mind-wandering. One region of the DMN shown to be correlated with dreaming is the ventromedial prefrontal cortex (vmPFC). Given that the vmPFC has been shown to be highly involved in regulating motivation (Panksepp & Biven, 2012), Zellner (2013) proposes that the psychoanalytic notion of dreaming relating to wish fulfilment (Freud, 1900/1997) is neurologically supported. The role of motivation and wish fulfilment in dreaming has been neurologically evidenced in numerous other studies (Perogamvros, Dang-Vu, Desseilles, & Schwartz, 2013).

The existence of unconscious (non-declarative) memory is discussed in a number of psychology textbooks (e.g., Eysenck & Keane, 2010). The existence of the unconscious has also been demonstrated in a range of neuroscience research. For example, de Gelder, Morris, and Dolan (2005) demonstrated through neuroimaging studies that unconscious fear influences emotional awareness of faces and voices. Many researchers have also shown the existence of unconscious processes such as repression through studies with neurological patients suffering with anosognosia, a condition in which people deny the existence of impairment, e.g., paralysed people believe that their limbs are still functioning normally, patients with bilateral cortical blindness may claim that their vision is intact, or amnesiacs argue that their memory is excellent (Vuilleumier, 2004). This sort of research supports one of the key tenets
of psychoanalytic theory, that of the unconscious. Berlin (2011) presented a range of neuroscientific research which demonstrated that “complex cognition can proceed in the absence of C[onsciousness] and that the unconscious brain is active, purposeful, and independent and can selectively access and activate implicit goals and motives” (p. 19).

The notion of neuroplasticity and learning also supports the psychodynamic notion of repeating and working through, supporting the need for longer term psychotherapy to help change long term underlying issues. Developing neural models of the mind helps provide evidence and rationale to psychoanalytical theory whilst also providing new and novel ways to improve psychodynamic psychotherapy (Kandel, 1999; Westen and Gabbard, 2002; Roffman, Gerber, & Glick, 2012).

2.4. The challenges to integration

Below, I highlight a number of challenges which have been identified in relation to integrating neuroscience into psychotherapy, as well discussing some of the counter points proposed against these challenges.

**Brain and mind**

Farmer (2009) suggests that a common objection psychotherapists have to neuroscience is around the debate of dualism, i.e., separating the brain and mind as two different entities. Placing brain and mind as separate entities was Descartes’ greatest error (Damasio, 1994). The two are intrinsic however they do hold separate positions; whilst the brain consists of the anatomical, physical structures housed within our skulls, the mind consists of the subjective experiences and image contents generated as a result of the processes and interactions of different brain regions (Damasio, 2011). Some counselling psychologists may view the study of the brain as a reductionist approach to human existence; however it is widely acknowledged by many neuroscientists that the mind belongs to the holistic, personal, and subjective experiences of a person, albeit that these experiences are products of the brain’s activity (Andreasen, 2001).
Reductionism: Losing the self through pathology

Fuchs (2004) suggested that one of the greatest challenges to integrating neuroscience and psychotherapy is the underlying focus of perspective. Whilst psychotherapy deals with the first and second person accounts of subjective experiences, neuroscience aims to objectify brain functions from a third person perspective. Fuchs (2004) proposed that whilst psychotherapy has spent so many years focusing on people’s will to change and how they find identity and meaning in their suffering:

a reductionist biological concept of mental life may gradually lead to a self-alienation: in the wake of a popularized neurobiology, we are beginning to regard ourselves not as persons having wishes, motives or reasons, but as agents of our genes, hormones and neurones. (p. 483)

Ivey and Zalaquett (2011) suggested that many psychotherapists worry about the medical model and that by focusing on neuroscience, we focus on pathology. Fuchs (2004) further proposed that whilst psychiatrists suggest diagnoses help destigmatise mental illness and alleviate patients from carrying the burden of fault for their suffering, there is a danger that we as humans begin to lose all form of agency and will to change; we start to see our problems not as tasks for us to face, but as faulty neuronal circuits out of our control.

However, Ivey et al. (2012) counteract this reductionist statement by arguing that neuroscience places a high value on environmental impacts and therefore reinforces psychotherapy’s psychosocial wellness model.

Lack of neuroscience training for practitioners and balancing its use

Ivey et al. (2012) suggest that many psychotherapists are not aware of the impact that the relationships they form (Goleman, 2007; Siegel, 2011) and the various therapeutic interventions and models (Farmer, 2009) have on the neurobiological level of their clients. They suggest that the “unintentional and unconscious impact that these practitioners have in this regard largely occurs because many professional training programs and theories textbooks have not made the connection between popular approaches to counselling and therapy and recent research findings in
neuroscience” (Ivey et al., 2012, p. 60) and as such, advocate for the inclusion of neuroscience into psychotherapy training. However, they do suggest that a balanced approach is to be taken when integrating neuroscience into psychotherapy, maintaining caution and enthusiasm to avoid being caught up in neuroscience literature which overstates findings without solid methodological research evidence.

Undertaking a balanced approach to the use of neuroscience for psychotherapy is also advocated by Gerber (2011), who suggests that whilst neuroscience has made great contributions to psychotherapeutic theory, caution should be taken when trying to find an all-encompassing solution to a problem; there is still a lot of unknowns in both fields, therefore development requires a blend of both psychotherapeutic and neurobiological techniques.

**The seductive allure of neuroimaging**

Whilst neuroimaging has provided advantageous input to research and psychotherapy, Beutel, Stern, and Silbersweig (2003) highlight that small changes in study design, image acquisition, processing, or analysis, can all yield significantly different findings and clinical implications. The allure of brain imaging pictures is also shown to have an effect on human reasoning. The use of brain images has been shown to lead participants into rating research findings as more reliable and trustworthy than they actually are (McCabe & Castel, 2008; Ali, Lifshitz, & Raz, 2014).

Weisberg, Keil, Goodstein, Rawson, and Gray (2008) discussed ‘the seductive allure’ of neuroscience information in general. They provided naive adults, students in a neuroscience course, and neuroscience experts, with brief descriptions of psychological phenomena followed by various neuroscience and non-neuroscience related explanations. They found that participants in the two non-expert groups judged explanations with logically irrelevant neuroscience information as more satisfying than explanations without neuroscience information. As such, psychotherapists should apply caution to neuroimaging findings, reviewing the methodology and procedures for key research applicable to their work.
The above discussions have provided a platform for what the current landscape is in relation to integrating neuroscience and psychotherapy. As can be seen, there are numerous advantages as well as a range of challenges to be acknowledged and understood. I now turn my attention to the key focus and paradigm under investigation, namely, the integration of neuroscience into counselling psychology.

2.5. Integrating neuroscience into counselling psychology – what does the literature say so far?

I undertook a systematic review to investigate what themes current academic journal publications discuss in relation to the integration of neuroscience into counselling psychology (Goss, 2015a). Part of this research was aimed at finding what, if any, research literature is available on the topic. I searched the psychinfo database for any articles containing ‘counseling psycholog*’ OR ‘counselling psycholog*’, AND, ‘neuro*’ in their title or abstract. Truncation was used on the word ‘psycholog’ to ensure that all plurals of psychology were included (e.g., psychologist, psychological), whilst truncation was used with ‘neuro’ to ensure all possible variations of neuro related papers were included in the search (e.g., neuroscience, neurology, neurobiology). I decided to exclude textbooks from my literature search for a number of reasons. Firstly, peer reviewed journal articles have undergone a process of review which has deemed an article of sufficient quality to represent a given subject or discipline, whereas textbooks often have not. By searching key counselling psychology journals (among others), I felt I was obtaining insight into what the primary neuroscience discussions are in the field of counselling psychology. Additionally, electronic journal database searches allow for structured systematic literature reviews to be undertaken, allowing for transparency and replication of results. A third reason was that textbooks often utilise authors from various backgrounds therefore not only can it be difficult to assess which books are specific to counselling psychology, but additionally, many books such as the UK handbook of counselling psychology recruit authors from disciplines outside of counselling psychology, posing a further degree of discussion to the relevancy of an article or chapter.
I found 21 publications which discussed the topic in the last 25 years, suggesting that it is a fairly young paradigm. There were two sources of publications, the USA and the UK. I will introduce the literature before discussing conclusions which can be taken from it.

2.5.1. Literature from the USA

Integration of neuropsychology and counselling psychology

The first group of literature from the USA was related to integrating neuropsychology into counselling psychology (Agresti, 1992; Corazzini, 1992; Kemp, 1992; Larson, 1992; Larson & Agresti, 1992; Malec, 1992; Paulsen, 1992; Woody, 1992; Lopez, Ryan, & Sumerall, 1998; Ryan, et al., 1999). As discussed in section 1.2, I see a distinction between neuropsychology and neuroscience; however I still viewed this literature as relevant to the present topic as there is without doubt a huge neuroscience aspect in the field of neuropsychology. The literature discussed a number of key components.

The first component highlighted the benefit of neuropsychology to counselling psychology. This included discussions on neuropsychology providing an evidence base for working as a scientist-practitioner (Agresti, 1992), as well as neuropsychology providing further information for therapeutic work with a client (Larson, 1992). Kemp (1992) highlighted that neuropsychology helps counselling psychologists integrate into a wide variety of work settings, including hospitals, rehabilitation centres, and university counselling centres. A number of authors highlighted the methods for implementing neuropsychology into counselling psychology practice, including a blending of assessment and therapy (Larson, 1992). Larson (1992) proposed various roles for counselling psychologists to undertake in neuropsychological settings, including psychoeducating clients and their families by interpreting neurologist data, discussing how assessed deficits may impact their subjective experience as well as mediating conflicts which may arise between patient and consultant. Counselling psychologists can also provide support for the adjustments that the client and family will have to make in the wake of acquired neurological conditions (Larson, 1992). Increased neuropsychological knowledge
could also support intervention planning with neurological and learning difficulty populations (Kemp, 1992). It was suggested that not only is neuropsychological work on the increase for psychologists, but that counselling psychologists want to get on board with it and have a lot to offer (Agresti, 1992; Corazzini, 1992; Kemp, 1992; Larson, 1992; Larson & Agresti, 1992; Malec, 1992; Paulsen, 1992; Woody, 1992; Ryan, et al., 1999), not just in practice but in research as well (Kemp, 1992, Paulsen, 1992; Lopez, et al., 1998).

The second component highlighted the dangers of neuropsychology, discussing risks that counselling psychologists need to be mindful of when integrating with neuropsychology. This includes the danger of false expertise, meaning that there is a danger a counselling psychologist may think they know more than they actually do on the subject of neuropsychology, and will work outside of their competency. This could prove to be a danger to the client, for obvious reasons. But even if no harm is caused by the counselling psychologist, they must also be aware of the increased occurrences of litigation that can occur within the medical world, and the added importance of working within their competency boundaries (Malec, 1992; Woody, 1992). Additional discussions in this component involved the financial lure of neuropsychology tempting counselling psychologists to work outside of their qualification (Malec, 1992). There were also concerns raised that a medical focus could lead counselling psychologists away from their philosophical roots (Agresti, 1992; Ryan et al., 1999).

A third component discussed implementing neuropsychology into counselling psychology training (Agresti, 1992; Corazzini, 1992; Larson & Agresti, 1992; Malec, 1992; Paulsen, 1992; Ryan et al., 1999). Discussions related as to whether neuropsychology should be implemented into the counselling psychology training curriculum, the answer generally being yes. Other discussions focused on how that implementation can be undertaken, including a view that counselling psychologists’ training should provide them with a minimum level of proficiency in neuropsychology, as opposed to fully specialised training - it is in post-doctoral training that practitioners can become fully qualified as neuropsychologists, should they wish (Paulsen, 1992). It was also noted that it is potentially ethically responsible for counselling psychologists to familiarise themselves with the
neuroscience literature and theory of their work area, particularly for learning difficulty populations (Kemp, 1992).

The fourth component centred on what the traditional view of a counselling psychologist identity is, as well as highlighting the focus that counselling psychology has often given to discussing its identity. Suggestions were made that there should be less focus and fear of losing identity and that counselling psychologists can maintain their core professional position whilst diversifying into other areas, such as neuropsychology (Agresti, 1992; Corazini, 1992; Larson & Agresti, 1992; Paulsen, 1992).

A final component to this literature was how it provided an education to the reader about neuropsychology. Kemp (1992) provided a case example of how neuropsychological testing can be carried out and used for conducting client work as a counselling psychologist in a college (university) campus setting.

Integration of neuroscience into counselling psychology

The second set of literature from the USA came from a special edition of the Journal of Counseling Psychology, published in 2014. This literature focused specifically on the paradigm of integrating neuroscience into counselling psychology.

Coutinho, Silva, and Decety (2014) defined the neural construct of empathy and its relevance for counselling psychology, particularly for the client-therapist relationship and for the context of intimate relationships/couples therapy. They highlighted the crucial role of social functioning research for counselling psychology, as social difficulties are at the root of so many clients’ difficulties. The ability of psychotherapists to regulate their emotions is crucial for effective therapy and as such, should be part of a counselling psychology curriculum, teaching students to not just empathise with a client through observation of the client’s emotion, but to also recognise the emotion within themselves, physiologically. Mindfulness may be a useful tool to develop this emotional self-regulation. It is suggested that neuroscience components should be used to develop objective and ecological research within counselling psychology, helping to measure and improve
the efficacy of therapy. Coutinho et al. (2014) suggest that the rapid increase of knowledge in social cognitive neuroscience will help therapists understand the key psychological processes which need to be addressed for each individual client, helping to promote positive brain plasticity changes. “In the future, the psychotherapist will be more close to assuming the role of a neuroscientist who investigates what in the brain needs to change and how” (Coutinho et al., 2014, p. 546).

Fine and Sung (2014) discussed how social cognitive theory and resilience theory can help counselling psychologists incorporate neuroscience research findings into a counselling context as well as highlighting possibilities for future counselling psychology research. Fine and Sung (2014) argue that if counselling psychologists can learn the language of neuroscience, they will be well placed to provide input and guidance on how lab experiments can be translated into the real lives of people who experience maladaptive functioning in life, as a result of prior experiences. “Counseling psychologists can bring a fully ecological perspective, provide expertise on empirically validated interventions, and play an important role in the communication of psychoeducational neuroscience news to parents, teachers, and children” (Fine & Sung, 2014, p. 525).

Gonçalves and Perrone-McGovern (2014) illustrated how neuroscience can provide a conceptual and methodological framework to understand clients within a transdiagnostic developmental perspective. They foresee affective neuroscience becoming a prominent category in counselling psychology research. They argue that counselling psychologists should be leading the way for utilising neuroscience research to develop effective interventions which, as highlighted by Coutinho et al. (2014), influence neural plasticity in a positive way. Gonçalves and Perrone-McGovern (2014) suggest that healthy development involves recognition and integration of four brain systems: the attention network, motivational network, emotional regulation network, and social cognition network. Counselling psychologists can focus on how these networks are associated with social emotional, cognitive, identity, and vocational development across the life span. Counselling psychologists can also research how early life traumas and psychosocial factors can effect these networks. It is also suggested that counselling psychologists can engage
in interdisciplinary research with neuroscientists to investigate the effectiveness of interventions such as cognitive reappraisal and mindfulness on emotional regulation. Gonçalves and Perrone-McGovern (2014) discuss the role of contextual factors in psychological well-being and suggest that a neuroscience approach is taken to understanding and using the effects of parental caring and nurturing attitudes, the promotion of healthy behaviors such as exercise and eating, and enriching one’s environment through activity and socialising, as a way of enhancing our clients’ well-being.

Sampaio and Lifter (2014) discussed the neural correlates of infant mental health and their correspondence to social emotional development. They suggested that counselling psychologists could use this neuroscience information when working with children, to inform their recognition and awareness for factors such as neglect and abuse by caregivers, depression and psychopathology of caregivers, severe lack of resources for the family, and vulnerabilities imposed by the infants. The neuroscience information could also be used to develop a continuum of interventions, with neuroscientific knowledge used as a rationale for the intervention type, length, and stage of a child’s development. Measuring changes in neural correlates is also proposed as a method of determining the efficacy of child-parent psychotherapy, as well as developing research into attachment and the role of environment in gene expression. Given that counselling psychologists often work with individuals, families, and the community to identify caregivers who are unable to deliver responsive care, “[i]t is critical for counseling psychologists to recognize the nature of these neural correlates and their impact on development when caregiving is less than optimal” (Sampaio and Lifter, 2014, p. 517).

Simon-Dack and Marmarosh (2014) examined recent advances in neuroscience research on healthy adults regarding neuropsychosocial interactions on human cognition and behaviour. They discussed the neuroscience developments and correlates of psychosocial stress management and social relational interactions, highlighting how these influence mental health. Suggestions were made for research which could help counselling psychologists investigate how individual differences and attachment styles impact oxytocin levels and psychotherapy. Simon-Dack and Marmarosh (2014) also propose that the role of the environment in gene expression
(see epigenetics in section 2.6) could support social justice orientated counselling psychologists in confronting the effects of poverty, neglect, racism, and discrimination on attachment and mental health, helping to guide reactive and preventive interventions. Simon-Dack and Marmarosh (2014) conclude that integrating neuroscience and counselling psychology “can only increase our understanding of the complexities of the interactions between biological mechanisms, personality, behavior, and mental wellness as well as allowing us to demonstrate increased efficaciousness in our approach and treatment of patients as counseling psychologists” (p. 532).

Wright and Diaz (2014) discussed the cognitive neuroscience approach to aging, including the biomarkers of Alzheimer’s disease (AD). They suggest that an increased knowledge of the neuroscience correlates of aging is important for counselling psychologists working in that setting. By using neuropsychological assessments, counselling psychologists can screen for memory impairments which may be related to dementia. Research and clinical work can be undertaken in parallel to develop interventions which slow down the progression of cognitive impairing diseases. Wright and Diaz (2014) highlight that social and cognitive engagement has been shown to reduce the risk of dementia and as such, counselling psychologists can develop interventions which focus on this in an older adult population, utilising behavioural and interpersonal interventions to promote well-being. It is suggested that an increased neuroscience knowledge can help social justice orientated counselling psychologists propose system changes which can help oppressed individuals access resources to determine the early onset of dementia. Wright and Diaz (2014) conclude by stating their hope that counselling psychologists utilise neuroscience research and collaborate with cognitive neuroscientists to develop research areas on aging; “[t]hrough this collaboration, we hope to be able to identify which treatment will be most appropriate for specific biomarkers, thus improving the quality of life of those who have AD and other dementias” (p. 538).

My systematic review limited the literature search to research articles which were published in the last 25 years. The primary reason for this was that neuroimaging techniques have only really developed in the last 20 years or so (Damasio, 2011),
therefore publications pre-1990 could be seen as somewhat skeptical in their body of neuroscience evidence. As such, the discussions of any papers published beyond 25 years ago may no longer be relevant to the present situation of counselling psychology and the results would not be applicable to counselling psychology’s contemporary position as a discipline, especially as it was only formed in the UK in 1994. However, even when I left the search period as open ended, there were only 4 additional papers which emerged, four of which were from the USA. None of these additional publications were specifically related to integrating neuroscience into counselling psychology. Stubins and Napoli (1956) was the earliest publication, though this work focused on a case study of how a counselling psychologist can help in the vocational and rehabilitation work of a long term hospital neuropsychiatric patient, in effect, what is now deemed a patient under psychiatric care, with no mention of neuroscience or neuropsychology. There were three other papers which each surveyed counselling and clinical psychology programmes to understand what the scope and status of neuropsychological assessment training opportunities were within their curricula (Goldberg & McNamara, 1984; Solomon, Hale-Fiske, McCaffrey, & Isaac, 1985; McCaffrey, Malloy, & Brief, 1985). Whilst these papers have an element of relevance to the neuropsychology discussion above, they are seen as only somewhat related in topic and outdated in their relevancy to contemporary discussion; as such I have deemed them as not contributing anything of additional value to the present research.

2.5.2. Literature from the UK

The remaining articles found in the systematic review were all from the UK and were published in the Counselling Psychology Review journal. Although five articles were found, only three of these were specifically related to the paradigm of integrating neuroscience into counselling psychology and one of those three was a brief reply to one of the other articles. Therefore, the two primary articles were Rizq (2007) and Goss (2015b).

I will begin by discussing those articles less relevant to the paradigm. Judd and Wilson (1999) presented a discussion on the role of identity within brain injury. Although this article presented nothing of note on neuroscience, there was an
interesting point made that psychotherapy has not been historically used with brain injured clients as they do not fit with the models of cognition, language, and emotion of a ‘normal population’. It was also suggested that therapists may overestimate differences between neurological and non-neurological populations, and underestimate the similarity of psychological distress experienced by brain injured people (Lewis, 1991). Sub-conscious feelings of guilt, anxiety, and insecurity may also lead therapists to resist working with brain injured clients (Gans, 1983). Judd and Wilson (1999) proposed a rework of Lewis’ (1991) model for conducting psychotherapy with a brain injured client, in which three key attributes were to be identified; assessing the neurological disorder and resultant cognitive deficits, understanding the psychological meaning and impact of the deficit for the client, and understanding the (client’s) broader social context. Although these are interesting discussions related somewhat to neuroscience, they are more related to working with a neurological population than with neuroscientific information.

Fairfax (2007) argues that neuropsychological assessments and psychometrics can generally complement the phenomenological core of counselling psychology practice, and in fact counselling psychologists are well placed to deliver them in a relational and reflective manner. He initially discusses that psychometric assessment is a core competency requirement of counselling psychology and yet it is has been neglected over the years. He identified that though he initially viewed neuropsychological colleagues as reductionist and struggled to grapple their terminology, he began to appreciate that recognising their world view is part of a holistic approach to clients. He proposed that a neuropsychologist’s role shares many similarities with counselling psychologists, including assessment, formulation, and recognising the individual and their contexts. Used in the right way, psychometric testing can be useful for the client and the therapeutic relationship. The difficulty is that unless neuropsychology becomes integrated into counselling psychology training, the profession will be excluded from what could be a valuable asset (Fairfax, 2007).

Drawing on contemporary work within psychoanalysis, Rizq (2007) argues that a marriage of neuroscientific and psychotherapeutic research is not only possible but necessary. Rizq (2007) suggested that some counselling psychologists see the rapid
developments of neuroscience as a threat to their models of mind and psychotherapy. However, she presents a plea for counselling psychologists to come together in a shared language, something which she suggests is being undertaken by psychoanalysis. Rizq (2007) suggests that the historic distinction between the human and natural sciences is still alive today and a concern remains among psychotherapists that neuroscience will diminish the complexity of the psychotherapeutic process, leading to the treatment of brains and objects rather than people and subjective experiences. Examples of memory, mirror neurons, and behaviour genetics are used to illustrate the benefits of neuroscience to psychotherapy. However, she also highlights the limitations of neuroimaging (Beutel, et al., 2003; Fuchs, 2004) as well as neuroscience’s inability to access the subjective lived experience of a person. Rizq (2007) proposes a pragmatic approach, suggesting that neither a biological nor hermeneutic (including a phenomenological or constructivist) account will individually suffice in explaining and reducing psychological distress, therefore, there is a need for counselling psychology and neuroscience to come together; in effect, a recognition of the biopsychosocial model. The differing language of the disciplines is acknowledged, with a suggestion that counselling psychology can help bring a softer and more approachable set of meaning to neuroscience findings:

Dialogue and discussion are a means to creative thinking: interdisciplinary debate a necessary insurance against the potential risks we face of navel-gazing and professional isolation. Opening the channels of communication does not mean we are abandoning our distinctive professional identity, our critique of the medical model, or our overriding commitment to the practitioner and client relationship. However, it may mean abandoning the ‘narcissism of minor differences’ (Freud, 1918a) that can sometimes, I fear, characterise our professional and interdisciplinary debates (Rizq, 2007).

Rumble (2008) was a reply to Rizq’s (2007) article, particularly on her point of neuroscience and hermeneutics providing two halves to the holistic view of a person. He suggested that whilst neuroscientific and hermeneutical knowledge might combine to form a more complete account of client distress, the integration of these two factors will also depend on the therapist and his or her relationship to this knowledge. The counselling psychologist is in some way a gate-way to how these
two epistemological positions interact within the therapy setting and is thus an additional part of how we view and understand clients.

It would be congruent to acknowledge that Goss (2015b) is my own work and as such, it is somewhat difficult to talk of it as an outside piece of literature related to the paradigm, however, it would still seem useful to expand on the points I made in the paper. I proposed that neuroscience should be integrated into counselling psychology, utilising the work of Jaak Panksepp to provide examples of how affective neuroscience can be used by counselling psychologists in the treatment of depression, post-traumatic stress disorder (PTSD), and mechanisms of attachment. I proposed implementing neuroscience into professional doctorate and CPD training, and suggested that Cooper and McLeod’s (2011) pluralistic framework may be one method of integrating it into our clinical practice. Although some counselling psychologists may see neuroscience as a reductionist view on the person and client, I suggested that acknowledging the brain and biology of a person is truly holistic and it may well be reductionist to ignore it. The counselling psychology philosophy of valuing the subjective experience is one of the reasons it may be so well placed to integrate with neuroscience, as it will bring unique perspectives to research. I discussed the ethical responsibilities of using neuroscience as a counselling psychologist. Neuroscience information should be used on a client by client basis and never to the detriment of a client. For certain clients, a biological explanation of their symptoms may be empowering whilst for others it could leave them helpless or dependent on medication. Whilst neuroscience can be used a psychoeducation tool, therapists do not have to always verbally share knowledge with a client; neuroscience can also be held solely by the therapist as a theoretical underpinning to their intervention, similar to other theory. Neuroscience can help counselling psychologists integrate into multi-disciplinary team (MDT) environments. A biological understanding of the mind can help counselling psychologists understand the views of psychiatrists, as well as communicate and defend their own views on what they perceive would be best for a client, leading to a greater MDT care system for clients.
2.5.3. What we can take from the existing literature

One thing that stood out from the literature review was that there were two sources of publications, the USA and the UK. There was one historic article which appeared to be from Slovakia (Gazdik, 1981), however, I was only able to find an abstract and this suggested that the primary discussion was concerned with how a counselling psychologist and a child neurologist can best co-operate in providing psychological care for children.

In terms of the USA, there are two distinct periods of publications. The first period consisted of 8 papers which all came from a special edition of SAGE journal The Counseling Psychologist, focused on exploring the growing involvement of counselling psychology within neuropsychology (Agresti, 1992; Corazzini, 1992; Kemp, 1992; Larson, 1992; Larson & Agresti, 1992; Malec, 1992; Paulsen, 1992; Woody, 1992). There were also two other papers published later in the 1990’s, which focused on this integration of counselling psychology and neuropsychology (Lopez, Ryan, & Sumerall, 1998; Ryan, Lopez, & Lichtenberg, 1999). The second distinct period consisted of six papers which were published in 2014, all in a special edition of the American Psychological Association Journal of Counseling Psychology, focusing on the integration of counselling psychology and neuroscience (Coutinho, Silva, & Decety, 2014; Fine & Sung, 2014; Gonçalves & Perrone-McGovern, 2014; Sampaio & Lifter 2014; Simon-Dack & Marmarosh, 2014; Wright & Diaz, 2014).

Overall, the USA based literature on integrating neuroscience into counselling psychology is very pro-paradigm. Although the articles relating to the integration of counselling psychology and neuropsychology highlight some risks and challenges that could occur, the second set of literature from the 2014 special edition of the Journal of Counseling Psychology is very much about acknowledging the different areas and contexts in which neuroscience and counselling psychology can benefit from each other. Whilst the 1992 publications provide historic neuro-related discussions within counselling psychology, the fact that the only set of publications specifically discussing the integration of neuroscience into counselling psychology were published in 2014, suggests that the discussion of integrating counselling
psychology and neuroscience in particular is very new. It is also possible that this recent special edition journal supports Gonçalves and Perrone-McGovern’s (2014) view that neuroscience will start becoming a common item of agenda for counselling psychology research in the USA. It is also worth noting that the majority of papers were theoretical discussion papers. There were only two quantitative research articles relating to this paradigm, both of which were surveys about the counselling psychology profession, as opposed to a quantitative testing of a hypothesis based on neuroscientific information. This is perhaps further evidence of the infancy of the paradigm.

The UK seems in even more infancy in its development of integrating neuroscience into counselling psychology. Judd and Wilson’s (1999) discussions had very little to do with the paradigm other than they were talking about a neurological client group. Fairfax (2007) discussed the integration of counselling psychology and neuropsychology which, though related, is different from the integration of neuroscience. Despite this difference, it is worth noting that Fairfax (2007) highlighted a lack of integration between counselling psychology and neuropsychology. Rumble (2008) has some relevancy to the paradigm in that he is replying to Rizq (2007), however it is a brief article, focused on a specific nuance of Rizq’s work relating to a high level, epistemological comment. This leaves two publications in the UK which discuss the paradigm, one of which is mine. Similar to the American articles, these are theoretical discussion papers, as opposed to quantitative or qualitative pieces of research.

2.6. Aims and rationale for the study

2.6.1. Why counselling psychology?

There is an ongoing body of literature which suggests that the integration of neuroscience and psychotherapy is well under way. However, as indicated in chapter 1, psychotherapy and counselling psychology are different entities. The need to consider the relationship between psychology and counselling played a key role in the birth of counselling psychology within the UK in 1994, when the division was created from a special interest group to provide a place for people to share ideas,
research, and practice from both psychotherapy and psychology (Lane & Corrie, 2006; Miller, 2006):

Counselling psychology has developed as a branch of professional psychological practice strongly influenced by human science research as well as the principal psychotherapeutic traditions. Counselling psychology draws upon and seeks to develop phenomenological models of practice and enquiry in addition to that of traditional scientific psychology. It continues to develop models of practice and research which marry the scientific demand for rigorous empirical enquiry with a firm value base grounded in the primacy of the counselling or psychotherapeutic relationship (British Psychological Society, 2005).

The integration of psychotherapy and psychology provides counselling psychologists with both a scientist-practitioner and reflective-practitioner identity (Lane & Corrie, 2006). The scientist-practitioner model emphasises the role of the counselling psychologist in producing and using evidence based psychological theory and research within all aspects of their work. This places counselling psychology alongside other professions that utilise the scientist-practitioner model e.g. clinical psychology (Corrie & Callahan, 2000). As reflective-practitioners, counselling psychologists are trained to appreciate the importance of self-awareness and the need to continually reflect on their own practice (Lane & Corrie, 2006). Schön (1983, 1987) proposed two forms of reflective learning for practitioners; reflection-in-action (i.e., reflecting within a therapy session) and reflection-on-action (i.e., reflecting after a therapy session). Therapists can continually develop the former by continued undertaking of the latter. Counselling psychologists can also integrate the scientist and reflective models (Blair, 2010). During therapy, counselling psychologists can utilise theory in their work with a client, whilst also being open to change and reformulating ideas in the face of ecological evidence (Stricker, 2003), whilst outside of therapy, reflection involves the use of supervision, continuing professional development, a self-critical stance, and openness to experience, (Woolfe et al., 2010).

Whilst the scientist practitioner model distinguishes counselling psychologists from psychotherapists (Strawbridge & Woolfe, 2010), the reflective, humanistic based
practitioner model helps distinguish counselling psychologists from other applied psychologists (Woolfe, 2012). As such, counselling psychology holds its own unique philosophical underpinnings of science and reflexivity which distinguish it from counselling and psychotherapy, and other forms of applied psychology, including clinical psychology (Hammersley, 2009).

The humanistic value base is a core tenet of counselling psychology, which impacts upon the direction of a practitioner’s research and therapeutic approach (James, 2013). However, integration is also a key aspect of counselling psychology, with recognition that there is no one right answer for every client and that a tailored and individual approach is required (Cooper & McLeod, 2011). Counselling psychologists are therefore trained to work from a number of therapeutic models, utilising their scientist, reflective, and humanistic identities as a framework for this integration.

Whilst other disciplines such as clinical psychology, educational psychology, and psychiatry have had greater association with neuroscience research (Mohlman, Deckersbach, & Weissman, 2015; Moldin, Rubenstein, & Hyman, 2006; Van Der Kolk, 2006; Viamontes & Beitman, 2006a, 2006b), counselling psychology's blend of scientific, humanistic, and reflective models of working are well placed to uniquely integrate with neuroscience, helping develop new and novel ways to further understand and support our species’ mental health. This suggests that a potential rich tapestry of both therapeutic and research benefit can be harnessed within each individual discipline of neuroscience and counselling psychology, if the two became further integrated. However, as indicated in section 2.7, there is a shortage of literature pertaining to the paradigm of integrating neuroscience into counselling psychology and a key collection of this literature was published very recently, in 2014. Additionally, these articles are theoretical discussions on how neuroscience can be integrated into counselling psychology, as opposed to research which demonstrates that the paradigm is well and truly alive through empirical studies.
2.6.2. Why the UK?

Not only is there a shortage of worldwide literature relating to integrating neuroscience into counselling psychology, but the vast majority of research is from the USA. There were two publications in the UK which specifically discussed the paradigm, one of which is mine. As such, it would appear that whilst there is some movement in the USA, UK based counselling psychologists have not yet begun explicitly integrating neuroscience into their practice and research, despite the advantageous benefits that each discipline could bring to each other. It is also possible that counselling psychologists have begun integrating neuroscience into their practice, but have not published any papers on the subject. As such, the present work is aiming to investigate UK based counselling psychologists’ views and experiences of integrating neuroscience into their work, in an attempt to determine whether it is something that they actually want to do, as well as understand what factors have led to these views.

2.7. Contribution to knowledge

To date, there does not appear to be any literature which has explored the views and experiences of counselling psychologists integrating neuroscience into their profession. Given that there has been some movement related to the paradigm in America, this research is seen as an opportunity for the UK to establish its position on what could be a beneficial paradigm. The reason I say positon is that the whole premise of this research is to establish what UK based counselling psychologists’ current views are. These could be pro-neuroscience, anti-neuroscience, or generally neutral. I am pro-neuroscience and I have proposed a number of views related to the paradigm in Goss (2015b). However, this research intends to obtain the views of a number of counselling psychologists, in hope that the collective outcomes of this research can help shape the future direction of integrating neuroscience into counselling psychology, whether it is for, against, or neutral.

2.8. Chapter summary

This chapter has introduced the benefits and challenges of integrating neuroscience into psychotherapy, before focusing its attention on what current literature tells us
about the paradigm of integrating neuroscience into counselling psychology. Although there is a small section of literature which discusses the benefit of the paradigm, it appears to be a young topic within counselling psychology and one that is generally being explored in the USA. Given the benefits which counselling psychology and neuroscience could potentially bring to each other, an argument is made for a study to investigate the views and experiences of counselling psychologists integrating neuroscience into their profession, exploring whether it is something that they have done, and whether it is something that they want to do. This research aims to carry out that study.
3. Methodology

3.1. Introduction

The aim of this chapter is to introduce the methodology adopted within this study and to discuss the reasons I chose this method of inquiry for the research. I will then discuss the research design, including sampling, data collection, analysis, and ethical considerations.

My primary aim was to choose a methodology which would allow me to travel into multi-layered sense making with participants. The question of integrating neuroscience into counselling psychology is one that could tap into many things for participants. As discussed in the introduction, it has been thought that neuroscience could lead to a reductionist view of human life, one that opposes the humanistic emphasis on subjective experience in the world of counselling psychology. This means that my research questions could touch on participants’ views of what it means to be human, how they make sense of what they are doing as a psychologist, as well as uncovering experiences that have led them to arrive at their current view on the subject. Although my research questions may seem professionally orientated, there is in fact the potential for personal reflection and sense making for participants, therefore, I wanted to employ a research methodology that would allow me to make sense of participants as they were making sense of their views, experiences, practice, and dare I say, life.

3.2. Research questions

It is perhaps worth recalling my research questions, if only to aid and remind the reader as I aim to explain the applicability of my chosen research methodology in relation to the questions under investigation. My primary research question is:

1. How do UK based counselling psychologists view integrating neuroscience into counselling psychology?

Within this primary question are two secondary subsidiary research questions:

2. What are UK based counselling psychologists’ understandings of neuroscience?
3. What do UK based counselling psychologists perceive as the advantages, disadvantages, and challenges of integrating neuroscience into counselling psychology?

3.3. Qualitative or quantitative?

I decided upon a qualitative approach for this research. The underlying epistemology of qualitative research is interpretivism (Lapan, Quartaroli, & Riemer, 2012). Interpretivism aims to use the subjective experiences and discussions of the participant as a guide for research inquiry (Bryman, 2008). Qualitative research can also fall under a critical perspective, which, additional to the philosophy of interpretivism, focuses upon the role of power within individuals and society, as well as the nature of inequality and oppression (Lapan et al., 2012). Whilst my research is not geared towards looking specifically at this critical perspective, I remained open to the concepts and approach of a critical qualitative philosophy, in case these sorts of discussions came up when my participants were making sense of their worlds in relation to my research questions.

Although I initially contemplated a quantitative or mixed methods approach, I decided that the employment of quantitative techniques such as questionnaires would not allow me to enter into the multiple layers and avenues which can exist within the subjective world of the human psyche (Smith, 2003; Silverman, 2010). Not only did I wish to understand what counselling psychologists’ views of integrating neuroscience into counselling psychology are, but I wished to gain an insight into the rich data of underlying thoughts, feelings, and experiences which had shaped their view on the paradigm, something which would typically be out of reach in quantitative methods. Given the emphasis on wanting to hear these multiple aspects of counselling psychologists’ worlds, I updated the thesis title during the early phases of my work, highlighting to readers that views “and experiences” were acknowledged as a key part of this research.
3.4. Epistemology and method

My chosen method of inquiry was interpretive phenomenological analysis (IPA). I will provide my rationale for this choice after introducing this method of inquiry. McLeod (2001) suggested that any qualitative research undertaken within western social science will be informed by at least two basic epistemologies, phenomenology and hermeneutics. I will begin with an introduction to these two underpinning philosophies of IPA.

3.4.1. Phenomenology

The first philosophical pillar of IPA is phenomenology. Phenomenology can be seen as one of the most basic tools of qualitative research (Osborne, 1994). It “seeks to set aside any assumptions about the object of inquiry, and build up a thorough description of the ‘thing itself’...involves an ‘in-dwelling’ in the phenomenon under investigation until its essential features reveal themselves” (McLeod, 2001, p. 56).

Husserl

Phenomenology was truly established as a philosophical movement through the work of Edmond Husserl (McLeod, 2001; Tufford & Newman, 2012). Husserl (1931/2012) opposed what he called naturalism – the concept of empirical science being the one and only source of truth (LeVasseur, 2003) and sought to develop a new method of scientific enquiry which placed emphasis on the lived, subjective experience of participants. Much of Husserl’s work was influenced by his views on consciousness. Husserl rejected the notion of Cartesian dualism and instead focused on the notion that human consciousness is always intentionally directed at something, and the essence of an object is what is to be understood, rather than the preconceived meaning. He saw phenomenological inquiry as a way for the researcher to see the world as it is, rather than how it is constructed (Caelli, 2000). Husserl (1931/2012) described this as direct seeing, in which “to know is to see, and to see is to look beyond constructions, preconceptions, and assumptions (our natural attitude) to the essences of the experience being investigated”, a process which became known as phenomenological reduction, epoche, or bracketing (Gearing, 2004, p. 1430). These three terms can often be used interchangeably (Gearing, 2004;
Tufford & Nerman, 2012). Although Husserl rejected Descartes’ dualism approach, it is likely that his method of bracketing off was in some way influenced by Descartes’ previous method of philosophical inquiry. Descartes (1641/1998) sought to develop his understanding of the world by systematically doubting what he had previously learned and assumed, allowing him to see openly into the rational truth of the world. Husserl’s method of bracketing has striking similarities to this method of inquiry; however whereas Descartes cast doubt on the capability of all sensory experience as a means of constructing consciousness, Husserl was more inclined to acknowledge sensory experience and only cast doubt on the idea that sensory experiences tell us how an object really exists (Packer, 2011). Husserl’s brackets were a self-imposed and temporary method of understanding, as opposed to the essential continued requirement of doubt imposed by Descartes (LeVasseur, 2003). Husserl (1931/2012) believed that this method of bracketing off would lead to a transcendental ego, namely:

the consciousness necessary for the apprehension of pure phenomenal experience devoid of any assumptions about personal history or location in space or time. Husserl thus distinguished between the ‘empirical ego’, familiar to the natural attitude, and the transcendental ego, the purified phenomenal consciousness and the true location of the science of phenomenology (LeVasseur, 2003, p. 413)

At this point I will merely acknowledge the similarities of this to the Buddhist nature of enlightenment, a point on which I will expand in section 3.4.6. It should be noted that Husserl’s approach was “egological” in that his focus was on creating a method of an individual developing a sense of themselves, as opposed to the classic social science inquiry of a researcher investigating a participant (McLeod, 2001, p.40). As such, Husserl’s initial philosophy of phenomenology was later adapted into alternative schools of inquiry, rendering it more applicable to atypical social science research.

Heidegger

After a number of years studying with Husserl, Martin Heidegger broke away from the idea of phenomenological reductionism and argued that understanding a person’s
lived, subjective experience involves interpretation on the part of the researcher, and bracketing out preconceptions was neither desirable or in fact possible (Heidegger, 1962; Tufford & Newman, 2012). Heidegger (1962) believed that we are born into the world and are always in some way affected by it, therefore the focus is not about studying the essences of an object, it is about studying the experience of being in the world, where contextual underlying meanings are obtained and valued through interpretation (Gearing, 2004). Heidegger referred to this focus on what it means to be human in the world as Dasein (Laverty, 2003). He believed that we are necessarily embedded in the historical context of the world and our lives, and it is how we engage this which develops our understanding of the lived experience. Heidegger’s concept of engagement is one which better aligns with atypical social science qualitative research, namely that of researcher investigating participant. However, Heidegger still emphasised the importance of understandings one’s historical experiences in order to develop understanding. Koch (1995) highlighted two key aspects of Heidegger’s philosophy; historicality of understanding and the hermeneutic circle. Historicality refers to how a person’s understanding of the world is influenced by their history and background, including the impact of the society and culture in which they have grown up in since birth; this is an indissoluble connection between person and world (Munhall, 1989; Koch, 1995; Laverty, 2003). The hermeneutic circle is discussed in section 3.4.2.

**Sartre**

Sartre aligned with Heidegger’s existential phenomenology, proposing that existence comes before essence (Sartre, 1946/2005). Sartre’s words indicate that the self is not a thing which exists, but which is always developing, i.e. we are in a continual process of becoming ourselves (Smith, Flowers, & Larkin, 2009). Sartre also highlighted the concept of nothingness (Sartre, 1943/n.d.), i.e., things which are absent from our worlds are as important as those which are present, for defining who we are and how we see the world (Smith et al., 2009).

In the present research I wanted to enter into each participant’s historicality of understanding, exploring their views and experiences of integrating neuroscience into counselling psychology.
3.4.2. Hermeneutics

The second philosophical pillar of IPA is hermeneutics - the philosophy of interpretation (Smith et al., 2009). The interpretive movement was arguably founded by Friedrich Schleiermacher, who proposed that interpretation is an art involving skill and intuition, which can greatly develop a researcher’s understanding of an object or person; Schleiermacher was a potential ember for the flame of the intersubjective philosophy of phenomenology that was to follow (Bowie, 1998; Smith et al., 2009).

Heidegger

As discussed above, Heidegger believed that studying the essences of an object (including a person) involves studying the experience of being in the world, where contextual underlying meanings are obtained and valued through interpretation (Gearing, 2004). As such, Heidegger’s work is often referred to as hermeneutic phenomenology. Heidegger (1962) held the view that understanding is connected to a given set of fore-structures (or pre-understanding), which are made up by a person’s historicality. As such, a person should become as aware as possible and account for these interpretive influences, particularly in relation to research (Laverty, 2003). Heidegger labelled this process as the hermeneutic circle, moving from parts of an experience to the whole, and then moving back and forth again and again, in a bid to develop the engagement and understanding of objects and texts (Annells, 1996; Laverty, 2003). The end of the hermeneutic circle process is said to occur when the investigator has reached a place of meaning which feels free from inner contradictions, at least for the time being (Brinkman & Kvale, 2014). By becoming aware of their inner fore-structure, a researcher can provide a priority of attention to the object under investigation, as opposed to their own pre-understanding (Smith et al., 2009). This concept shall be explored further within bracketing (section 3.9.2).

Gadamer

Hans-Georg Gadamer, influenced by Husserl and Heidegger, extended hermeneutic phenomenology into practical application (Laverty, 2003). Gadamer stated “Language is the universal medium in which understanding occurs. Understanding
occurs in interpreting” (1960/204, p. 389). Gadamer felt that understanding and interpretation are bound together and that questioning is an essential part of developing new horizons and understanding:

Understanding is always more than merely re-creating someone else’s meaning. Questioning opens up possibilities of meaning, and thus what is meaningful passes into one’s own thinking on the subject...To reach an understanding in a dialogue is not merely a matter of putting oneself forward and successfully asserting one’s own point of view, but being transformed into a communion in which we do not remain what we were (Gadamer, 1960/1998, p. 375)

In relation to the hermeneutic circle of developing understanding, he believed that understanding and interpretation are bound together and as a result, a definitive interpretation is likely to never be possible, as it is continually evolving (Annells, 1996; Laverty 2003). Gadamer agreed with Heidegger’s hypothesis that historicality plays an active role in a person’s understanding, and he believed that this could have a positive role in developing new learning and meaning.

I acknowledge that my own views on integrating neuroscience into counselling psychology are formed by the experiences that I have so far lived in life. I wished to hear what other counselling psychologists’ views are. This involved interpreting the views of participants as well as attempting to interpret what and how their experiences have shaped those views. As such, it was important for me to understand how my own views influenced the interpretive process. I have discussed this further in section 3.9.

3.4.3. Idiography

A third major influence of IPA is idiography. Idiography is concerned with focusing on the particular, as opposed to the more common nomothetic approach of psychological research, which is geared towards generating results from wider populations and groups (Smith et al., 2009). However it should be noted that idiography does not avoid or disengage with developing results which can be
generalised, however it places an order of preference on first establishing the individual experiences, before comparison to a wider group (Smith et al., 2009).

My aim was to develop a collation of idiographic counselling psychologist views on the paradigm, which could then be carried forward individually and collectively with other participant views, providing results which could be tentatively generalised to a wider counselling psychology population.

3.4.4. So, what is IPA?

Jonathan Smith is widely cited to have first introduced IPA in Smith, Harrè and Van Langenhove (1995). Smith’s aim was to provide a method of analysis which allowed systematic exploration of idiographic, subjective, social, and lived human experience (Biggerstaff & Thompson, 2008). IPA founds itself on the interpretive phenomenology outlined above. It attempts to allow peoples’ experiences to speak for themselves, aligning with Husserl’s concept of gaining insight through reflection on everyday experience, using the interpretive processes discussed by Heidegger. It is geared towards investigating those moments when a person reflects on an everyday experience, developing it into a more thought out and significant experience, which has been processed through cognition and affect (Smith et al., 2009). IPA is idiographic because it places importance on the individual participant as a unit of analysis (Eatough & Smith, 2006).

IPA is a dynamic process, whereby the researcher is attempting to make sense of the participant as the participant attempts to makes sense of their world, a process often referred to as double hermeneutics (Smith et al., 2009). Smith et al. (2009) also suggest that IPA operates a double hermeneutic by combining the single hermeneutics of empathy and questioning, allowing the researcher to not only stand in the shoes of the participant and attempt to enter their world, but to also stand beside the participant, viewing and questioning the participant from different angles. IPA acknowledges this interpretative element and assumes an epistemological stance whereby, through this methodical and open interpretative methodology, it becomes possible to truly access an individual's cognitive inner world, something which
distinguishes it from other qualitative methods of inquiry (Biggerstaff & Thompson, 2008).

IPA follows a set of procedures laid out by Smith et al. (2009). These are outlined in section 3.7. Before describing the reasons why I chose IPA for this study, I would like to introduce two other epistemological philosophies which have influenced me in this research, Buddhism and pragmatism.

3.4.5. Buddhism

In the spirit of reflexivity, I feel I should briefly touch upon Buddhism. Buddhism influences my world view and shapes my ontological and epistemological views in life. Without going into superfluous detail, a primary aspect of Buddhism is impermanence, a suggestion that everything is ever changing (Gunaratana, 2001); our views, thoughts, feelings, and emotions, each one comes and goes. Many of the perceived truths and beliefs I held as a 14 year old have long since changed for me, a process which has continually occurred throughout my life. In humanity, there was once a firm belief that the world was not round and that all cosmological bodies orbited the Earth, yet those views changed, and who knows, a future theorist may one day find some evidence that our world is flat or that Earth is at the centre of the universe. I feel the notion of impermanence extends to all things. There is a whole other philosophical debate to be had as to whether the Buddhist view of impermanence could be seen as impermanent in itself, thus creating the potential for permanence, however, this is beyond the scope of the present work. The key aspect is that my epistemological orientation is based on the view that we cannot currently know if there is one definitive right answer. I feel this view aligns with the interpretivist and phenomenological epistemologies discussed above, in that there is no objective truth, and that perhaps all meanings are constructed within our individual and social perspectives. However, I also feel that it would be wrong to abandon the possibility that objective truths do exist; the difficulty is how we will ever know we have found them.
3.4.6. Pragmatism

In some sense, my overarching academic epistemological orientation in life is closer to pragmatism. I acknowledge positivism and empiricism, and I believe a focus on attempting to drive down to absolute facts can provide direction and structure to research, however, I have no idea if such facts exist; therefore, I also acknowledge the merits of relativism and I feel that this orientation is as valid and fruitful to developing human knowledge as any other, for it is through our perceptions and constructions that we experience and make sense of the world and any possible truths. This is why I am personally comfortable with the notion that the scientific objective underpinning of neuroscience can be integrated with the scientific focus on subjective experience underpinning counselling psychology.

Pragmatism highlights the notion of selecting the most appropriate research for the question at hand, “judging the quality of a study by its intended purposes, available resources, procedures followed, and results obtained, all within a particular context and for a specific audience” (Patton, 2002, p. 71-72). My aim was to select what I felt was the most appropriate research question for the paradigm at hand, as well as the most appropriate research method for answering that question.

3.4.7. Why I chose IPA

Given my epistemological orientation and view that what we think we know often changes over time and at this point in my existence, it is not possible to know if there is one specific true answer to all questions, I wanted to embrace a research methodology that would allow me to hear and learn from the world views of other people in relation to my research question. This would allow me to construct and develop new understanding both for myself and readers of my research, in relation to how UK based counselling psychologists view integrating neuroscience into counselling psychology. As such, I decided that the interpretive and phenomenological approach of IPA was a sound methodological approach to take to my current research question(s), as it would allow me to enter into the thoughts, feelings, and experiences of counselling psychologists, uncovering a range of viewpoints on a fairly new paradigm within the UK, which could then, depending on
the outcomes, be expanded upon in further work, using a similar or completely contrasting method of research enquiry:

The aim of interpretative phenomenological analysis (IPA) is to explore in detail how participants are making sense of their personal and social world, and the main currency for an IPA study is the meanings particular experiences, events, states hold for participants (Smith & Osborne, 2008, pp. 53)

There were a number of key alternative methods which I considered. I initially considered using the grounded theory approach of Strauss and Corbin (2008), however, although not always the case, I felt that adopting this approach may place too much emphasis on trying to develop a theory out of my results. I was concerned this would lead to me almost forcing the analysis as opposed to letting my participants’ experiences speak for themselves and then, and only then, reflecting on whether any new insights had developed in relation to the paradigm. I felt that IPA’s focus on anchoring findings in direct quotations (Smith et al., 2009) provided a sound method for allowing participants’ voices to be heard. I also considered thematic analysis; however there were a number of reasons as to why I felt IPA was a better choice for my research. The primary reason was that I felt IPA had an established structure, rooted in theory. Though Braun and Clarke (2006) suggested that IPA could be constrained by its theoretical roots, Pringle, Drummond, McLafferty, and Hendry (2011) argued that “theoretical roots can add a sense of depth and purpose that thematic analysis may lack” (p. 22). The latter view resonated with me and I felt that IPA’s systematic and yet flexible approach, as well as its explicit acknowledgement of the role of interpretation in qualitative research, made it a sound methodological choice. A second reason for my choice of method was that thematic analysis often seeks themes which represent a population of participants, whereas IPA attempts to seek meaning in both the individual and collective worlds of participants. This focus on individual and collective experiences aligned with the aims of my research, as I wanted to hear the individual views and experiences of counselling psychologists, whilst also bringing these views together to present an element of generalisability. Additionally, Brocki and Wearden (2006) suggested that IPA should start with, but then go beyond a standard thematic analysis. I felt that by undertaking IPA, I would be able to delve deeper into making
sense of participants and their experiences, both individually and collectively, than I may have been able to through other qualitative methods such as thematic analysis. Further to the reasons discussed above, IPA acknowledges the role of prior understanding in research and recognises the role of the researcher in meaning making, something which I felt was important given my prior interest in neuroscience and counselling psychology.

As such, I decided that IPA was the best choice for this research.

3.5. **Participants and sampling**

Below, I outline my method of sampling, as well as introducing the participants who took part in my research.

3.5.1. **Sampling**

In line with qualitative and IPA protocols, my sampling was purposive, in that I wanted to select participants who could give a particular perspective on my research question, namely, UK based counselling psychologists. Finding suitable participants was carried out through *opportunities* (current contacts and people who I am familiar with) and *referral* (word of mouth suggestions by my supervisor and other people who were familiar with my research) (Smith et al., 2009).

**Selection/Inclusion Criteria**

It is recommended that IPA participant populations have a degree of homogeneity, to ensure an element of consistency and relevancy in participant responses (Smith et al., 2009). All participants were UK based British Psychological Society (BPS) and Health and Care Professions Council (HCPC) registered counselling psychologists, who had been qualified for at least one year. The UK requirement related to my research focus on investigating UK based counselling psychologist perspectives (see section 2.6.2). Counselling psychologists are required to demonstrate core competencies in order to be registered as charted practitioner psychologists. By selecting BPS and HCPC registered participants, I aimed to obtain an element of homogeneity in participants’ perceived level of qualification. I was not too
concerned with controlling for participants’ level of experience as I felt different levels of experience would provide interesting perspectives; however I wanted to ensure that participants had been qualified for at least one year. The main reason for this was that I anticipated participants would make reference to their training when discussing their experience of neuroscience, either that it was or was not included. Therefore, it felt important that participants had completed their training and could give a reflective view on it, as opposed to trainees who may be amidst development and unsure on what their training would cover. Selecting participants who were at least 1 year qualified would also likely provide me with views from psychologists who had experience of being fully integrated into a counselling psychologist career, though it was not a specific requirement for them to currently be in practice.

When advertising for potential participants, I asked people to self-select themselves into one of three groups; little/none, moderate/some or high/keen. The groups related to their perceived self-interest and/or understanding of integrating neuroscience into counselling psychology (advertisement available in appendix A and B). The aim of this was to ensure I heard a range of views and experiences relating to the paradigm, helping to enrich the understanding and learning I was hoping to develop.

**Sample Size**

It can be difficult to exact an appropriate sample size in IPA and there is no right answer; IPA is focused on obtaining a detailed interpretative account of participants therefore many researchers acknowledge that this can only be realistically achieved with small sample sizes – “sacrificing breadth for depth” (Smith & Osborne, 2008, pp. 55). My aim was to interview six to nine participants. This was based on Smith et al.’s (2009) recommendations of four to ten participants for professional doctorate IPA studies.

My initial hope was to recruit an equal amount of participants for each interest group. Although I did not want to become too focused on separating the groups out, as this would somewhat oppose the homogenous nature of IPA sampling, I still felt it would be productive for the research to have a range of opinions from people with
varying interest/understanding in the paradigm. However, after a number of recruitment drives, I found myself struggling to obtain a second participant for the ‘little interest/understanding group’. The potential reasons for this are explored further in the discussion. As such, I recruited an extra person into the ‘medium interest/understanding’ group. I had already recruited two participants for the ‘high interest/understanding’ group; therefore I decided to hold my data pool at six participants, to maintain as balanced perspective of understanding/interest as possible. Given my enjoyment of entering into multiple-levels of interpretation, along with my previous experience of conducting IPA research for my MSc thesis, I did not want to constrict the depth of my analysis with too many interviews. This further influenced my decision to interview six participants. Whilst I was open to recruiting more participants if need be, I found my initial pool of six provided a rich, detailed, and interesting analysis, with an element of data saturation in their responses, therefore no further recruitment was undertaken.

3.5.2. Participants

Based on the recommendations of Smith et al. (2009), I will now introduce my participants, attempting to provide a basic introduction to their background and professional location. However, it should be noted that as my participants are all counselling psychologists and the UK counselling psychology network is relatively small and familiar, I shall not provide too much detail on participants, in order to maintain their anonymity.

Participant 1 – Rachel is a British female, who has been qualified as a counselling psychologist for circa 4 years. She qualified through a professional doctorate. She works in the south-west with children and young people from troubled families and backgrounds.

Participant 2 – Zara is a British female, who has been qualified as a counselling psychologist for circa 5 years. She qualified through a professional doctorate. She works in the north-east, in an inpatient unit for eating disorders.

Participant 3 – Jenny is a British female, who has been qualified as a counselling psychologist for circa 2 years. She qualified through a professional doctorate. She has worked locum but predominantly works in research, at a midlands university.
**Participant 4 – Erin** is a British female, who has been qualified as a counselling psychologist for circa 5 years. She qualified through a professional doctorate. She works in Scotland with young people and adolescents.

**Participant 5 – Liam** is a British male, who has been working as a counsellor and psychologist for circa 30 years; however the point at which he became a chartered counselling psychologist is unknown, though is confirmed. He works in private practice, teaching, and research at a north-east university.

**Participant 6 – Nancy** is a Hungarian female, who has been qualified as a counselling psychologist for 6 years. She qualified through the independent route. She works in adult mental health at a south-east primary care setting.

### 3.6. Data Collection

#### 3.6.1. Recruitment

Participants were recruited directly via email, though I initially spoke to some participants at networking events and conferences, before sending a participation email (Appendix C). Each participant informed me which sub-group of paradigm understanding/interest they belonged to, prior to the interview. This was to ensure I had as equally distributed population as possible for each sub-group.

#### 3.6.2. Interviews

I carried out one semi-structured interview with each participant. Semi-structured interviews are seen as the exemplary method for IPA (Smith & Osborne, 2008). This form of interviewing allows for a balance of structure and flexibility. I had an initial set of questions to ask each participant, however, the flow and direction of the interviews were guided by these questions, rather than dictated by them. This mix of structure and flexibility created a sense of uniformity and consistency in the topics discussed within each interview, whilst also allowing me to enter and probe unique items which came up in each individual interview. This form of interviewing aligns well with IPA as it allowed me, the interviewer, to truly enter into the individual world view of each participant, whilst maintaining course on my particular area of interest (Brinkman & Kvale, 2015). This type of interviewing felt comfortable to
me, as it aligned with the type of interaction one may find in a psychotherapy session, something I conduct on a regular basis. That said, it was important that I maintained interviews as what they were, research, as opposed to psychotherapy. The interview schedule is listed below as questions 1 to 5. The relevant part of the research question being addressed is highlighted above in bold;

What are UK based counselling psychologists’ understandings of neuroscience?

1. Can you describe your understanding of neuroscience?

How do UK based counselling psychologists view integrating neuroscience into counselling psychology?

2. What is your view on integrating neuroscience into counselling psychology?
   a. Have any particular factors or experiences led you to this view?

What do UK based counselling psychologists perceive as the advantages, disadvantages, and challenges of integrating neuroscience into counselling psychology?

3. Can you describe any advantages that you perceive from integrating neuroscience into counselling psychology?

4. Can you describe any disadvantages that you perceive from integrating neuroscience into counselling psychology?

5. Can you describe any challenges that you perceive from integrating neuroscience into counselling psychology?

I also asked participants if there was anything they would like to add or ask at the end of each interview.

Interviews were carried out at various locations. It was decided in collaboration with participants whether face-to-face or skype interviews were more appropriate. The decision to undertake an interview by Skype was primarily driven by the location and availability of participants. Table 1 below highlights the method of conducting each interview.
Table 1

Method of interviewing format

<table>
<thead>
<tr>
<th>Participant</th>
<th>Face-to-face</th>
<th>Skype</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rachel</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Zara</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Jenny</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Erin</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Liam</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Nancy</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Face-to-face interviews have long been established in qualitative research, however, as technology advances, qualitative interviewing develops alongside, including the use of video conferencing programmes such as Skype (Moylan, Derr, & Lindhorst, 2015; Redlich-Amirav & Higginbottom, 2014). Interviewing face-to-face has generally been the gold standard of qualitative research, above telephone and other non-visual interview platforms. However, given that skype can also provide a visual platform through a webcam, in which the presence of nonverbal and social cues can be maintained for qualitative interviews (Sullivan, 2012), it felt more important to capture the views of participants who I felt would provide relevant and rich viewpoints for my research, albeit through the lens of a webcam, rather than opt for participants on the basis of their ease of access and locality.

3.7. Data Analysis

3.7.1. Transcribing

IPA requires a verbatim record of the research data, therefore each interview was audio recorded and then transcribed. It is acknowledged that the interpretative analysis takes place even in transcribing. For IPA, transcription generally includes all words spoken, including false starts, significant pauses, laughs, cries, and other features worth noting (Smith & Osborne, 2008). However, given that IPA focuses on interpreting the content of data, there is less emphasis on recording and transcribing each nuance of an interview such as exact pause lengths and non-verbal
utterances (Smith et al., 2009). That said, pauses and non-verbal communications can still form an important part of data analysis and given my psychotherapeutic inclination towards the psychodynamic view that we communicate on various conscious and unconscious levels, I still included aspects of these nuances within my transcripts. O’Connell and Kowal (1995) suggest that as a rule of thumb, transcripts should record only that which could be subject to analysis. Each transcript is individual to the participant, i.e., one person may speak with a slower pace, therefore, it would perhaps take a longer length of pause to feel relevant to the analysis than somebody who talks at a faster pace. The same individual appreciation can be applied to changes in voice intonation and so forth. Given my role as a trainee practitioner psychologist, I feel my experience of monitoring for individual non-verbal communications within psychotherapy provides validity to my interpretive decisions in transcribing. It should also be noted that each turn of speak was allocated a new line number in the transcript, to support the ease of analysis and review.

I undertook all transcribing and analysis using Microsoft Excel. Smith et al. (2009) highlighted that more IPA researchers are moving toward computerised analyses and whilst it is not the preferred method of some researchers, an electronic analysis can be a useful process if it aligns with one’s usual working practices. Having conducted previous research (including IPA studies) in numerous ways, I have found it personally beneficial to utilise computer technology for the entire analysis process, as it helps me to maintain a balance of fluidity, creativity, and organisation in my work and as such, it is part of my usual working practice.

3.7.2. Analysis process

The flow chart below in figure 1 outlines the analysis process. This process aligned with Smith et al. (2009). Each stage is discussed in detail further below. An example of how I worked with a transcript is included in Appendix G.
Once the verbatim transcript was produced, I initially read through it a couple of times to begin the process of familiarising myself with the participant, their data, and their world.

**Stage 2 - Initial coding**

I then examined the content on an “exploratory and semantic level” (Smith et al., 2009, pp. 83). In the right hand margin, I simply made notes on any thoughts or feelings which came to me as I read through the data. This was basically a free textual analysis, where I was beginning to interpret meaning from the data. I generally made three types of comments. Descriptive comments, whereby I focused on the content and subject of what the participant had said; linguistic comments, whereby I focused on the language and specific words used by the participant, including non-verbal communications such as pauses, laughter, change in intonation etc.; and conceptual comments, whereby I began to communicate some of my interpretations, posing questions and notes on the participant’s data, similar to a...
running commentary on the patterns and areas of interest that I was noticing within the data.

**Stage 3 - Develop emergent themes**

In the left hand margin, I then began to develop themes which I felt summarised the free flowing notes I had previously made. The aim was to reduce the high volume of data into short sharp representative summaries, which became the emerging themes. As I analysed each transcript, I would often begin to notice that some of my comments and notes were similar, and that the emerging themes often repeated throughout the data, both within and across participant transcripts.

**Stage 4 - Search for connections across emergent themes**

I then collated all of the emergent themes into a table and began to cluster them into categories of similarity.

**Stage 5 - Develop super-ordinate themes**

Based on the groupings of emergent themes, I then created my super-ordinate themes. This is an over-archiving theme which represents a summary of the emergent themes that sit within it. Developing the super-ordinate theme was primarily carried out through abstraction (identifying patterns between emergent themes) with an element of focus on numeration (acknowledging the frequency with which an emergent theme occurs); however it was important to not over emphasise the role of numeration, as frequency of occurrence is not always a direct indicator of importance, a single theme can serve as a pathway for a number of other related emergent themes (Smith et al., 2009). I then created a table for the super-ordinate themes developed from the participant’s data.

**Stage 6 - Move to next participant**

I moved onto the next participant’s transcript and carried out stages 1 to 5, repeating for each 6 participants. It is important to treat each case as its own, aligning with IPA’s idiographic philosophy (Smith et al., 2009). I also decided to carry out my analysis only once each interview had been completed, as I wanted to approach each
interview without any preconceived themes or analyses potentially shaping my approach.

**Stage 7 - Look for patterns across all participants**

Once all individual cases were analysed, I placed each table of super-ordinate themes next to each other and looked for any patterns across the participants. I looked for any connections in theme content, any ways in which a theme in one case illuminated another, as well as any themes that stood out as overall master themes, which other super-ordinate themes could fall under.

**Stage 8 - Create master themes and sub-themes**

Finally, I created a table of the master themes and sub-themes which were found to represent the participant population. In this table and all previous superordinate theme tables, examples of individual participant transcript extracts were provided for each theme, helping to provide evidence and context to what the theme was trying to communicate.

**3.8. Trustworthiness, validity, and rigour**

As with all research, reliability, trustworthiness, and rigour are key components of demonstrating the quality, validity, and applicability of results and findings; in effect “how can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to?” (Lincoln & Guba, 1985, p. 290). Mishler (1990) reformulated validity as the “social construction of knowledge” (p. 417) and redefined it as “trustworthiness”, stating that “if our overall assessment of a study’s trustworthiness is high enough for us to act on it, we are granting the findings a sufficient degree of validity to invest our own time and energy” (p. 419).

Golafshani (2003) suggested that examination of trustworthiness is vital in ensuring reliability in qualitative research; however, due to the lack of uniformity in qualitative research methodology, constructing predetermined frameworks for assessing the trustworthiness (validity) of such research is unlikely to succeed (Rolfe, 2006). Whilst quantitative research aims to develop reliable measures and
obtain objective findings or replicable outcomes, the large sample sizes deemed statistically suitable in quantitative research cannot realistically be analysed in qualitative depth, as it is likely that the amount of data and relationships between the factors and processes observed would become too complex, time consuming, and overwhelming to be coherently useful (Yardley, 2000), hence, one of the main reasons why qualitative research tends to employ small theoretical samples. Yardley (2000) acknowledged that qualitative research is in a tricky scientific middle ground. On the one hand, qualitative research bases itself within the idea that truth and knowledge are developed from our constructs of reality, therefore, “there can be no fixed criteria for establishing truth and knowledge, since to limit the criteria for truth would mean restricting the possibilities for knowledge” (p. 217). On the other hand, the infancy of qualitative research means that those who seek to undertake and publish qualitative research are often subject to being evaluated by quantitative journal criteria that are irrelevant to their methodological approach, by reviewers who are unfamiliar and perhaps disengaged from the methods, philosophy, and rationale they have adopted (Stern, 1997). Recognising the need to balance these two factors, Yardley (2000) developed four criteria for demonstrating trustworthiness (validity) within qualitative methodology, acknowledging the need for flexibility in each criterion, to adapt with the varying nuances of different qualitative research. The first criterion is sensitivity to context, which relies on the researcher acknowledging contextual influences, namely theoretical, relevant literature, empirical data, sociocultural setting, participants’ perspectives, and ethical issues. The second criterion is commitment and rigour, highlighting the need for an in-depth engagement with the research topic, methodological competence and skill, thorough data collection, and demonstrating a depth and breadth of analysis. The third criterion is transparency and coherence, which highlights the importance of clarity and power of the proposed argument, transparent methods and data presentation, a sound fit between theory and method, and reflexivity. The fourth criterion is impact and importance, with a focus on how the results can be used theoretically (i.e., enriching understanding), socio-culturally, and practically (i.e., for community, policy makers, health workers). I have used these criteria as a basis for developing trustworthiness and rigour within my research.
3.9. Reflexivity

Yardley’s (2000) third stage of demonstrating trustworthiness promotes the role of reflexivity in qualitative research. This is further supported by Stiles (1993), who highlights the importance of reflexivity and transparency throughout the research process, helping the researcher to acknowledge their fore-structure and internal processes throughout the work.

3.9.1. What is reflexivity?

Reflexivity differs from reflection. Reflection involves an in-depth consideration and review of events which have happened outside of one’s self, seeking to learn by understanding how, when, what, and why something may have happened, and what impact it may have had on people (Bolton, 2009). Reflexivity involves questioning our own attitudes, thought processes, assumptions, prejudices, values, and actions, in an attempt to understand our roles in relation to others (Bolton, 2009). It focuses on investigating the underlying processes of our own experiences, aiming to raise our internal workings to the light of consciousness. For example, if I were to have an argument with a friend, I could be reflective by considering what words were said and how our actions changed (tone of voice, aggression etc.). I could also be reflexive by recalling what thoughts and feelings were occurring for me prior, during, and after this argument, as well as considering what internal processes led to me becoming embroiled in the argument and how I feel about what happened.

As such, reflexivity can play an important role in research, allowing researchers to engage in developing self-awareness and understanding around factors which may influence their work (Yardley, 2000). Throughout my research, I attempted to be both reflective and reflexive.

3.9.2. Understanding reflexivity in relation to bracketing

Husserl believed it was possible for a researcher to bracket out all prior conceptions and experiences when seeking to understand a new object; however Heidegger and Gadamer believed this was not possible and suggested that the historicality and fore-structures of a person are always present, but they can be used in a positive manner
to further understanding. Heidegger proposed that a researcher should aim to become as aware as possible and account for these interpretive influences within their investigation (Laverty, 2003). Given my passion for integrating neuroscience and counselling psychology, it is perhaps even more pertinent that I should strive to be aware as possible of my views on the subject, in order to bring a balanced and valid approach to my interpretations and research.

Although it can be difficult to get a definitive contemporary explanation of bracketing (Tufford & Newman, 2012), Gearing (2004) described it as a “scientific process in which a researcher suspends or holds in abeyance his or her presuppositions, biases, assumptions, theories, or previous experiences to see and describe the phenomenon” (p. 1430). Starks and Trinidad (2007) note that a researcher should “engage in the self-reflective process of ‘bracketing’, whereby they recognize and set aside (but do not abandon) their a priori knowledge and assumptions, with the analytic goal of attending to the participants’ accounts with an open mind” (p. 1376).

There are also varying views as to when bracketing should be carried out, whether it is in the analysis phase, the commencement of the research, or even at the outline and proposal stage of the investigation (Tufford & Newman, 2012). The timing of bracketing also aligns with the bracketing method. One method of bracketing is to write field notes and memos throughout the research (Cutcliffe, 2003), something which Glaser (1998) felt freed up the researcher in a free flowing manner. Another method involves the researcher carrying out interviews with a neutral person, exploring their views and beliefs related to the research (Rolls & Relf, 2006). A third common method of bracketing involves the researcher keeping a reflexive journal throughout their work. Aamodt (1991) suggests that reflexivity helps researchers to understand their internal processes and to make sense of how their self-awareness can be used within the analysis. Ahern (1999) argues that “bracketing and reflexivity are fruit from the same tree” (p. 410); she believes that reflexivity allows the researcher to engage and understand their pre-conceptions and subsequently hold them in conscious suspense during their investigation, something which aligns with Heidegger and Gadamer’s views on the role of historicality.
Smith et al. (2009, pp. 25) suggest that the researcher always “brings their fore-conception (prior experiences, assumptions, preconceptions) to the encounter” but that priority should be given to the new object, i.e., the participants’ views and experiences. Smith et al. (2009) subsequently suggest that bracketing is an enlivened cyclical process in which a researchers’ fore-understanding can be raised to consciousness throughout the research process, ignited by the views and experiences of participants. As such, they proposed that bracketing can be connected with reflexive practice.

3.9.3. Reflexive practice in my research

I attempted to provide transparency and trustworthiness throughout the research process through reflexive practice. Below, I discuss a number of ways in which I undertook a reflexive approach in my work.

Acknowledging my own fore-structure and historicality

My decision to undertake this research was influenced by own interest in the paradigm. As such, it was important that I acknowledged my own fore-structure and historicality (Heidegger, 1962) in relation to the research question. The key thing for me was to approach the research with a sense of neutrality, as far as was possible. My Buddhist influences lead me to hold an epistemological position that life is impermanent. Things are constantly changing, including my own views. Therefore, I try not to become overly attached to ideas to the point where I am not open to hearing opposing views. My thought process when devising my research was that three things could happen. The first was that the analysis demonstrated counselling psychologists are completely pro-integration. The second was that counselling psychologists are pro-integration but that there are some resistances and challenges which need to be acknowledged if the paradigm is to move forward. The third would be that the analysis suggested counselling psychologists are against integration and want nothing to do with neuroscience. I would like to think that I was ready to accept any of these outcomes. If my findings yielded the completely pro-integration first option, then that would be useful in moving the paradigm forward. If it was the completely anti-integration third option then I could accept this and move forward in more of an isolated pursuit of integration. However, the
second option was perhaps the most advantageous of the three. By hearing both pro and anti-integration views, I would have a wide range of learning, not just on how counselling psychology can move forward on the paradigm, but also, highlighting key challenges which need to be accounted for and developed, both as a discipline and within my own personal career. After all, we each have blind spots to what we sometimes do not want to see. This is what led me to developing a research question which sought responses on advantages, disadvantages, and challenges of integration.

My reflexive journal

I maintained a reflexive journal throughout my research, in an attempt to improve the validity and trustworthiness of my results. As recommended by Tufford and Newman (2012), this journal included my thoughts and feelings on a number of items, including but not limited to, my reasons for undertaking this research, any prior assumptions I had on the topic of integrating neuroscience into counselling psychology, what my interests and potential conflicts were in relation to the paradigm, and my personal values and reflections from interviews and analyses, including any potential conflicts of interest with my participants. Porter (1983) advocates for a first person perspective to be taken in research, particularly in relation to reflexive writing, as this cements the idea that the researcher is an integral part of the research process. This makes a lot of sense to me therefore I undertook a first person perspective throughout my research and reflexive processing.

Aheren (1999) suggests the process of reflexive writing should begin in the formation stages of the research; unfortunately, I did not do this, however I did include a reflexive piece in my research proposal. I provide a summary of my reflexive journal at the end of this thesis. By writing this journal, I was able to continually try and unearth any internal processes which may have been impacting on my research.

Reflexivity in my interviews

I attempted to be reflexive and demonstrate transparency within my participant interviews. Given my passion for the paradigm, as well as the fact that a number, if not all of the participants were aware of this, it was important for me to be congruent
in the interviews in order to develop an open view point from participants. There were a number of instances whereby I may have sensed some hesitancy or reluctance by participants to provide negative or opposing views on the paradigm, therefore I attempted to bring this into the room to help encourage a balanced perspective, without forcing or questioning their openness. Often it was in the literal words I used, as in this extract from Jenny:

I: you’ve mentioned when you answered the question initially you said, ‘from a positive point of view’ so I wasn't sure if there was kind of a flip side to that, that you felt about the integration of neuroscience [153]

J: erm [pause] I suppose [pause] [154]

I: and this is probably the time where I say yes, kind of, I'm into the subject but there's no kind of, I'm interested in both [155]

J: yeah [156]

I: like I'm not, there's no kind of requirement to, to only give positive [157]

J: yeah, no I think, [pause] yeah what do I mean by that, I suppose, I suppose more when it comes, yeah coz then quite often once I'd gone through that process with people of doing like the diagnostics and stuff then… [158]

A similar type of transaction took place with Nancy. Her initial responses gave me some sense that she felt the interview was geared towards providing a positive picture of neuroscience, therefore early on in my questioning, I attempted to bring some congruency into the room:

I: I'm mindful that I sit here and there's potentially, I’m into the neuroscience… but certainly it can be the opposing, it doesn't have to be… it could be for or against [111-115]

At times, it was not so much my words as to how I structured my questions. Rachel was very pro-neuroscience and the first half of her interview had been very much
discussing the benefits. Although the next question on my schedule was due to ask about the advantages of integration, I made an in the moment decision to ask about the disadvantages first, possibly as I was concerned we would build up so many positives that the negatives would not be given fair time or reflection. This is best observed in my interpretive comments, in the right hand margin of transcript line [93] (see figure 2 below).

<table>
<thead>
<tr>
<th>Emergent Themes</th>
<th>Transcript</th>
<th>Initial Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>I trying to maintain equal views, non bias</td>
<td>right, okay, what would you say then are the kind of, the disadvantages potentially of, of integrating neuroscience into counselling psychology, what are some of the kind of, the risks, or the, the [pause]</td>
<td>at this point I decide to go to disadvantages first, I think it was because the client was high/keen interest and was reeling off plenty of advantages, so rather than building up the positive kitty to much, I wanted to ask when she would be more open and less influenced by so many positives</td>
</tr>
</tbody>
</table>

**Figure 2.** Extract from Rachel’s transcript demonstrating my question choice

These participant hesitancies and my decisions to acknowledge them were often supported at the end of interviews when participants indicated their awareness of my interest:

E: yeah, well I'll be interested in reading your research and what's come out of it and how you think we should move it forward [298]

R: I think it needs people like yourself perhaps to you know, to, to go ahead and, and, and, drive this forwards

Throughout interviews, I worked to maintain a neutral stance and it was only at the end of interviews that I engaged in my thoughts and ideas about the research and about the paradigm in general, as happened towards the end of Zara’s interview as we moved into debriefing:
I: I think I wonder if I stand alone with it… and then the next stage is to find out are there other counselling psychologists who want to, and then how can we go about changing that [661]

However, I do make mistakes and there was a moment during Jenny's interview whereby an answer she gave brought a smile to my face. Jenny noticed this, but, given that there was a sense that she did not always feel comfortable talking about neuroscience information, it felt better to be congruent about my smile, rather than leave her in doubt as to whether she had said something strange:

J: [laughs] you're looking at me funny [446]

I: [laughs] I'll tell you why I'm smiling, because I pub, I published a paper on this subject and in that subject I said that that's one of the things that we can look at…[447]

J: oh okay [laughs] [450]

I: so I was being careful [laughs] not to bring my own kind of er, enthusiasm and kind of see where you went at with it [451]

J: okay yeah, yeah, I don't know, sorry I probably just rambled on [456]

I: no, no… that's great to kind of hear that, that angle from you [457-459]

J: good [laughs] [460]

An additional process which stood out was that participants really were making sense of things within the interviews, aligning with IPA’s other notion of double hermeneutics, i.e., a researcher making sense of participants as participants make sense of their worlds. Participants were often overt about their sense making. Erin highlighted that she had initially been unsure she would be able to fill the interview hour but actually, it had been a useful experience for her and helped her solidify her view on the subject:

E: erm, no, I think, erm, just, talking about that then actually I thought how am I going to fill an hour talking about neuroscience and, and
actually it's solidified in my mind the value of using it, erm, but perhaps a bit more about the erm, thinking about the limitations of using it and also knowing your limits as a practitioner [286]

Jenny indicated that this was the first time she had really reflected on the question of integrating neuroscience:

J: erm, no I don't think so, I didn't really have, to be honest I'd not really, obviously I like read the information that you sent but then I'd not really thought about it so [laughs]

Given the fact that she spoke of using neuroscience quite often in her work, it was interesting that the topic hadn’t previously entered into conscious reflection.

Sometimes sense making was not necessarily overtly discussed by participants and it felt like more of an unconscious process. This meant that I had to be mindful of allowing the participant to form their own view, whilst simultaneously working with them to explore and expand their sense making process. Figure 3 below shows a transcript extract from Erin in which I felt this sense making process was occurring. My interpretations in the right hand margin explain my processing, as I attempt to uncover Erin’s world without overtly influencing it, utilising empathy and questioning to try and understand her perspective.
<table>
<thead>
<tr>
<th>Emergent Themes</th>
<th>Transcript</th>
<th>Initial Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>E unsure on her position</td>
<td>but I don’t know how that relates to what I’ve just said that but [laughs], but that simple truth just came to my mind</td>
<td>there really is a sense of unknown going on for E, she says one thing, but then also finds logic to debate the other side, which in some sense, is how she seems to view neuroscience, she thinks it can be useful, but also how it isn’t useful, here, it provides a simple truth, but that truth may not be true</td>
</tr>
<tr>
<td>I needing to be active in interview</td>
<td>yeah yeah, no to me I think that made sense kind of what you were saying</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and there’s something about the conversation as a whole of integrating neuroscience and counselling psych and, and actually that in the therapy itself, that relationship with the client of kind of [pause] yeah, it’s easy to use it as a single truth but we value the, the holistic view and that is the view on kind of looking at all the factors and</td>
<td>I’m working a lot in this interview, trying to interpret things, here I’ve come up with what I’ve written above</td>
</tr>
<tr>
<td></td>
<td>I suppose maybe goes into a disadvantage or a risk is using, science as a quick fix answer to, for a client</td>
<td></td>
</tr>
<tr>
<td></td>
<td>because it’s easy but is it the right thing because, will the client then, after a few weeks or whatever, the same issue’s there because you’ve not looked at all the factors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>so you’ve got to look at the science but you’ve got to look at the other stuff as well and form it together</td>
<td></td>
</tr>
<tr>
<td></td>
<td>yeah, exactly so, relating it back to ADHD you can say that right neuroscience has told us that the pre-frontal cortex suggests that, that scans of the pre-frontal cortex suggests that people with attention difficulties have changes in their brain in that area of the brain so therefore that causes ADHD, ADHD exists and we can treat it and we can give you a tablet to prevent that when, so then a parent hearing that is going to go ‘great yes, there’s science behind it, we know what area of the brain is causing this for my child and, and that, that’s it now, I get it’</td>
<td>the ‘exactly’ here is a bit more comforting, I’m not just putting words in her mouth,</td>
</tr>
</tbody>
</table>

**Figure 3.** Transcript extract from Erin’s interview to demonstrate sense making
However, there were times when it felt certain participants had previously reflected on the topic of neuroscience. At times, it almost felt like Liam had an underlying agenda and interpreted my questions in particular ways, indicating he had previously thought about this topic and had particular views he wished to express. The transcript extract in Figure 4 below highlights an example of this:

<table>
<thead>
<tr>
<th>Emergent Themes</th>
<th>Transcript</th>
<th>Initial Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>L enjoys breaking things down</td>
<td>39: I: so, I guess then, the main question er, is kind of what is your view on integrating neuroscience into counselling psychology and what's led you to, to have that view?</td>
<td>again, several parts to the question for L, not straightforward - he seems to enjoy breaking things down into components</td>
</tr>
<tr>
<td>L perceiving I's views</td>
<td>40: L: erm, well, there's several parts to what you've just said there aren't there I mean there's the whole notion of integration itself, you know what is counselling psychology, what do we think counselling psychology actually is fundamentally erm, because your question 'what's my view of how neuroscience might be integrated or what's the role of it in counselling psychology', it's, it sounds like your question's assuming that it currently doesn't have a role or isn't integrated</td>
<td>again, L is saying I'm assuming neuro isn't integrated with CP now, but he's misinterpreted my words again, indicating underlying process for L about my view</td>
</tr>
</tbody>
</table>

*Figure 4.* Transcript extract from Liam’s interview to demonstrate potential agenda

It was important that I acknowledged these different starting points of knowledge for each participant, tailoring my style of questioning to facilitate and explore the differing views and experiences. For example with Liam, I spoke a lot less in the interview, partly because of the length of his responses and partly because he almost self-directed his reflections. However at times, I had to be more assertive with Liam.
to allow probing and exploratory questions to be utilised in order to delve deeper into his meaning making.

Some participants were confident in explaining their understanding of neuroscience whilst other participants were a little more hesitant. Figure 5 below highlights a number of transcript line references in which I felt Liam was attempting to teach or demonstrate his neuroscience knowledge to me:

<table>
<thead>
<tr>
<th>Emergent Themes</th>
<th>Transcript</th>
<th>Initial Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>L demonstrating knowledge</td>
<td>yeah yeah, let me show you another book that I've just come across you might be interested in, so I've been trying to build up a bit of reading, now here's one I came across very recently, this is by Ed Foster have you come across that book?</td>
<td>L getting other books, I wonder if these were pre-selected before interview, real sense of him wanting to demonstrate these to me as I didn't even get a chance to finish my previous sentence and struggle to get a response in</td>
</tr>
<tr>
<td>learning neuroscience through books</td>
<td>erm you know these networks will all operate in your life and it, it's unconscious because you're not aware of these networks operating and these schema level knowledge influencing you, so you know the fact that there's books like that out there suggests that it is happening because there's a book out there that you can point to, you know neuroscience in psychotherapy, of course you might debate whether that's part of counselling psychology tradition I don't know, this guy he's just about to retire he's been around a long time has Bill Baker sorry Andrew Baker, erm, and he's a clinical psychologist so</td>
<td>L's vocabulary is full of psychological and neuroscience words 1 is demonstrating learning neuroscience of psychotherapy through books</td>
</tr>
</tbody>
</table>

*Figure 5.* Transcript extract from Liam’s interview to demonstrate his knowledge sharing confidence
On the contrary, it was apparent early on in Erin’s interview that she was not as confident discussing neuroscience and that I would have to take a more active and exploring role. Figure 6 below highlights my reflections of this in two separate exchanges [2] and [7-12].

<table>
<thead>
<tr>
<th>Emergent Themes</th>
<th>Transcript</th>
<th>Initial Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>neuroscience is the study of the brain</td>
<td>yeah, oh, erm, right so my understanding of neuroscience is that it’s the study of erm, the brain rather than the mind erm and it’s the scientific study erm, yeah of the brain, is that enough [laughs]</td>
<td>neuroscience is the study of the brain, the scientific study of the brain</td>
</tr>
<tr>
<td>E on edge/hesitation?</td>
<td>E:</td>
<td>E’s comment of is that enough shows some potential nerves of hesitation, does she feel on test?</td>
</tr>
<tr>
<td>psychology studies mind, neuroscience studies brain</td>
<td>so the neurosciences will deal more with the brain structure but the psychology sciences will deal more with the mind structure</td>
<td>as above</td>
</tr>
<tr>
<td>interview requires increased activity</td>
<td>12 E: yeah, that's what I think [laughs]</td>
<td>notice even early on, short responses from E compared to previous interviews, I may have to be more active in this interview</td>
</tr>
</tbody>
</table>

**Figure 6.** Transcript extract from Erin’s interview to demonstrate her reluctance in discussing neuroscience

The above extracts highlight the process of interpretation which was occurring throughout my interviews and analyses. However, given the variation of processes across participants, the interpretive dynamics did not form part of the collective main
themes and are seen more as a part of the analysis process rather than specific findings relating to the research question.

Bringing these types of exchanges to the forefront of my consciousness and acknowledging their existence in the process of the interviews and analyses helped to ensure that I was working in a continual process of a reflexive researcher (Etherington, 2004).

3.9.4. Insider researcher

In section 3.4.4, I discussed the role of double hermeneutics within IPA. IPA emphasises an active role for the researcher as they attempt to balance empathy and understanding in order get as close as possible to the participant’s world, trying to stand both in and alongside their shoes to take an insider’s perspective (Smith et al., 2009). As such, I aimed to utilise my fore-structure of counselling psychology and neuroscience in a positive way. Rather than seeking a particular set of responses or outcomes, I aimed to channel my interest in the paradigm into fuelling my enthusiasm for the research, allowing me to enter into a greater depth of empathy and understanding with participants when they were discussing neuroscience, both within the interviews and when developing my interpretations within the analyses. This allowed me to adopt a balanced insider perspective.

Training as a counselling psychologist requires me to constantly engage in reflective and reflexive processing so that I can go some way to separating my own cognitive and emotional processes from those of my clients - “If you develop a deep knowledge of yourself, eliminate the majority of your blind spots, and have a good base of patient experience, you will begin to see how much... is yours and how much is evoked by the patient” (Yalom, 2002, p. 67). This ability to be mindful of my own views and processes is something which I attempted to apply throughout the research process, working to hear the participants’ views and recognising where my own fore-structures may have been coming into play.
3.9.5. Independent audit

Smith et al. (2009) suggested that the independent audit is a powerful way of a researcher thinking about validity in qualitative research. Yin (1989) proposed that validity may be enhanced by maintaining a coherent and understandable filing structure, which for IPA may consist of research stages including proposals, interview schedules, audio data, annotated transcripts, theme tables, and developing stages of the report. A researcher can undertake an independent audit by taking the hypothetical role of an external auditor and checking that a coherent chain of arguments runs through the research, ensuring that “one is forced to check the coherence of one’s claims” (Smith et al., 2009, pp. 183). Throughout my work, I maintained an electronic filing system consisting of these different items. This provided me with the confidence that I could demonstrate a clear and systematic approach to my work. Though audio data and transcripts were maintained in encrypted forms in order to protect the identity of participants, I provide an example of how I worked with each transcript in Appendix G. Although this is only a brief extract, its aim is to provide transparent evidence of how I approached each stage of the analyses.

Another method of demonstrating internal audit is through the use of member checks. Member checking is a process in which analyses are returned to participants for confirmation of the researcher’s accuracy (Angen, 2000). Whilst Lincoln and Guba (1985) propose that member checking is an important technique for checking the creditability of research findings, there are many who argue against the use of member checking, particularly in interpretivist research. Angen (2000) and Sandelowski (1993) propose a number of critiques in relation to the use of member checks for establishing the validity of qualitative research. They suggest that member checking relies on the assumption that there is a fixed truth of reality, which can be accounted for by a researcher and confirmed by a respondent. This somewhat goes against interpretive research such as IPA, which is based on the idea that understanding is co-created and that there is no objective truth that can be found by every person. Furthermore, the interviews may have led participants to change their views on certain topics and as such, if they were to review their previous words after the analyses, they may likely be coming from a different point of view. It is also
possible that researchers and participants may come from different places with their agendas in the interview, which could lead to each person holding different interpretations for an event, for any number of reasons. There then becomes a challenge of whose interpretation is correct, which adds a complication to the analysis process. As such, I decided not to undertake member checks in my research, as I felt they somewhat contradicted the interpretive and individual nature of IPA. I undertook a process of independent audit by attempting to provide a clear and transparent rationale and evidence of my actions throughout the research process and by maintaining a systematic electronic file structure.

3.10. Ethical considerations

This work was carried out in line with the University of Manchester, Health and Care Professions Council Standards (HCPC, 2008) and British Psychological Society (British Psychological Society, 2010) ethical principles for conducting research. Given that I felt my interview skills involved learning from my clinical practice, such as reflecting and summarising, the British Psychological Society (2009) practice guidelines were also adhered to within this research.

Following approval of an initial research proposal, I submitted for ethical clearance from the University of Manchester ethics committee (Appendix F). Following ethical approval, I recruited participants via the route of purposeful sampling outlined in my ethics documentation. Each participant was contacted via email, in which I described the research and provided them with a copy of the participant information sheet (Appendix D). The information sheet explained about the project, why participants had been approached, and what the process of taking part would be for each participant. The information sheet also informed participants that should they take part, they would be free to withdraw their data at any time. Participants were also informed that any personal information collected during the research would remain confidential and that although transcripts would be included within the project report, a pseudonym would be used to provide anonymity for each participant. Smith et al. (2009) have highlighted that it is not possible to provide confidentiality in qualitative research, as other people will see the transcript data. However, qualitative researchers can offer anonymity, and as such, any details
relating directly to a participant’s identity were given a pseudonym during the analysis. I also changed any details, including names or locations, which I felt could obviously indicate a participant’s identity. I felt this was important, especially as participants may be well known to other counselling psychologists who may read the research. I also provided participants with an advert form (Appendix A) requesting that they select and confirm which interest/understanding group best described them. I agreed with each participant whether we would carry out the interview face-to-face or via Skype. I then emailed them a copy of the consent form (Appendix E) and asked them to complete the form and return it electronically before our interview date, or if we were interviewing face-to-face, I would bring a copy that they could choose to sign on the day if they preferred. The consent form reiterated that participants were free to withdraw at any time, that the interview would be audio recorded and transcribed, with a pseudonym used to protect their identity, and that any data collected may be published in anonymous form in books or academic journals. At the start of each interview, I checked whether participants had any questions in relation to the consent form. At the end of each interview, I asked participants if they would like a copy of their transcript to review. They all declined, however, one participant requested to see any extracts and quotations from their interview that were to be used within the main body of the work. I reminded participants that should they change their mind, they were free to contact me, along with any other questions that may have come up for them. I also asked each participant if they would like a summary of the results, to which they all said yes. A debriefing was taken at the end of each interview, in which I asked the participants if they would like to ask any further questions. Given the professional alliance with participants, a number of debriefing sessions involved discussion of methodology and questions relating to my own personal interest in the paradigm.

Following each interview, I transferred the audio recordings to a hard drive and deleted the audio from the Dictaphone. All audio and data for the research was password protected. Given that I analysed my transcripts electronically, there was no need to secure hard copies of my work. In terms of Skype interviews, I undertook the same process of audio recording via a Dictaphone. Microsoft policy is to encrypt video and voice calls and they do not record any voice calls (Gillet, 2012; Elaine,
2013; Microsoft, 2015), providing a layer of security to data transmitted during the interviews.

3.11. Chapter summary

This chapter has provided an outline and rationale for my chosen research methodology. I acknowledged that both quantitative and qualitative methods of research can be fruitful to developing an understanding of phenomena. My goal was to be pragmatic, both in terms of developing a research question which felt best for the current status of the paradigm as well as in terms of developing a research method that could best answer such a question. I chose IPA as my research method as I felt it would allow me to elicit a range of participant views and experiences on the paradigm whilst acknowledging the role of interpretive processes, in both myself and participants, in constructing the meaning behind these views. IPA provides a flexible yet structured approach to carrying out research and it does not seek to elicit any particular theory or truth from the analysis, it aims to develop a process of sense and meaning making, in multiple directions. I outlined how I sampled my six participants before providing a description of my analysis process, including discussions on interviewing face-to-face and through Skype. My research was approved by The University of Manchester ethics board, with a number of processes undertaken to align with this approval, including the use of participant advertisement, information, and consent forms.
4. Findings

4.1. Introduction

In this chapter I will summarise the themes which emerged from the interviews with participants, in relation to their views and experiences of integrating neuroscience into counselling psychology. I then discuss how these findings converge and diverge with existing literature on the paradigm.

Six master themes (super-ordinate) emerged, with twenty six sub-themes (sub-ordinate) underpinning them. These themes represent my interpretation of the data, including the way in which I felt individual themes connected across participants. As such, I have presented my findings in a way that conveys my description and interpretation of a theme, as well as providing extracts of participants’ transcript data in an attempt to support and further elucidate my results. Participants’ quotations are introduced by their first initial and ended in [brackets] by their transcript line reference.

I first present a table of master themes and sub-themes (table 2), highlighting which participants contributed to each theme. I then present each individual master theme, beginning with a table outlining the sub-themes, contributors, and transcript line references, followed by a narration of each sub-theme, including example quotations. It is important to write up IPA analyses in a way that best communicates the particular research goal (Smith et al., 2009). I have included a number of participant transcript extracts for each sub-theme as I feel this is the best way for me to communicate my interpretations, allowing the reader to see what it was within the data that led me to such an interpretation.

4.2. Master themes - Introduction

Table 2 (below) illustrates the six master themes which emerged from the data; these were ‘The dangers of neuroscience’, ‘Defining neuroscience’, ‘There are ways that neuroscience can help us’, ‘Methods of learning and the need for training’, ‘Integration: The opposition and the need - finding the balance’, and ‘My practitioner identity’. It should be noted that there is no particular order of hierarchy
to the themes presented; each one is seen to have equal relevancy. The table indicates how many participants contributed to each theme, as well as providing a list of each contributing sub-theme.
Table 2

Summary of master themes

<table>
<thead>
<tr>
<th>Master Theme</th>
<th>Contributors</th>
<th>Subordinate Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Dangers of Neuroscience</td>
<td>All</td>
<td>A risk to therapy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Could we lose our CP values</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Removing bio-fixated client's agency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reductionism</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overusing neuroscience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk of half-complete knowledge</td>
</tr>
<tr>
<td>Defining neuroscience</td>
<td>All</td>
<td>The study of the brain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part of psychology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Multi-levelled</td>
</tr>
<tr>
<td>There are ways that neuroscience helps us</td>
<td>All</td>
<td>Rationale for interventions - to colleagues and clients</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Empowering clients and developing rapport</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Helping us understand the individual more</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Developing us scientist-practitioner psychologists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A language to unite and support us in MDTs</td>
</tr>
<tr>
<td>Methods of learning and the need for training</td>
<td>All</td>
<td>Neuroscience not taught on doctorates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How I have learnt neuroscience so far</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The challenges of learning neuroscience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Methods of implementing neuroscience into our training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We need neuroscience in doctorate and CPD training</td>
</tr>
<tr>
<td>Integration: The opposition and the need - finding the balance</td>
<td>All</td>
<td>Lack of integration thus far...fear of losing identity?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overall, neuroscience is good for counselling psychology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too much counselling, not enough psychology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is all about integration, that is what we do</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We integrate neuroscience, but according to the client</td>
</tr>
<tr>
<td>My practitioner identity</td>
<td>All</td>
<td>I am a counselling Psychologist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A pragmatic approach to work</td>
</tr>
</tbody>
</table>
Each participant contributed to six of the master themes. Smith et al. (2009) suggested that recurrence of a theme is generally indicated by “a third, or a half, or, most stringently, in all of the participant interviews” (pp. 107). I decided that each sub-theme should be represented by at least one third of the population, i.e., two participants, allowing the case for both the idiographic and generalisability of the results to be acknowledged.

### 4.3. Master theme 1 – The dangers of neuroscience

Table 3 presents the contributors and transcript line references for each sub-theme within this master theme.

Table 3

<table>
<thead>
<tr>
<th>The dangers of neuroscience</th>
<th>Master Theme</th>
<th>Sub-Theme</th>
<th>Contributors</th>
<th>Key Cross References</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A risk to therapy</td>
<td>Zara &amp; Nancy</td>
<td>Zara: 350, 352, 360, 364 Nancy: 352, 373, 378, 386</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Could we lose our CP values?</td>
<td>Rachel &amp; Nancy</td>
<td>Rachel: 46, 97-98, 185 Nancy: 286-290, 542-550</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reductionism</td>
<td>Erin &amp; Liam</td>
<td>Erin: 170, 180 Liam: 10, 164, 198,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overusing neuroscience</td>
<td>Jenny &amp; Liam</td>
<td>Jenny: 326, 362 Liam: 164-166, 172,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk of half-complete knowledge</td>
<td>Rachel &amp; Erin</td>
<td>Rachel: 138 Erin: 136-142, 186-188</td>
</tr>
</tbody>
</table>

Each participant highlighted a number of ways in which integrating neuroscience could be a danger to counselling psychology. I chose the word ‘danger’ as although there were numerous discussions about potential disadvantages and negative aspects to the paradigm, each participant generally provided counter arguments for disadvantages, ways in which they could be avoided. Therefore, most of these sub-
themes highlight things which were seen as potential dangers or risks to counselling psychology, as opposed to unavoidable consequences of integration. I have provided an example of a within-participant counter argument in the first theme example, from Zara.

4.3.1. Sub-theme 1.1 – A risk to therapy

Throughout her interview, Zara discussed the importance of therapy as an underpinning element of training and working as a counselling psychologist:

I: so the therapy is like the core of, of counselling psychology? [411]

Z: absolutely [412]

Zara’s concern was that neuroscience can be used by pharmacological companies as a support for the use of chemical interventions, something which poses a risk to the more costly psychological interventions delivered by counselling psychologists:

Z: if the medication companies actually got themselves in gear, potentially [pause] potentially there could be more reliance on medication rather than psychological perspective [350]

It was interesting to see Zara find herself in an element of contradiction on this point. She appeared to suggest that neuroscience could basically contribute to improved chemical intervention. Although she initially stated this as a negative in terms of reducing psychological interventions, she was left wondering whether improved chemical intervention is a bad thing, if it helps the person engage in therapy. This sort of alternating view came out in a number of themes and was perhaps an indication of a counselling psychologist’s ability to look at alternative and competing explanations:

Z: I suppose if people understood the neuropsychology side of it, maybe, there would be more effective chemical interventions for more things… but then that wouldn't necessarily be a disadvantage either because the side effects of the stuff that people are given at the moment are so awful that people prefer not to be on anything and that
actually can make the psychology side of it very difficult because they're so poorly they can't actually engage [352-356]

For Nancy, the concern was that neuroscience feeds into funding hot-topics, which drive the focus of health care systems, often away from seeing the person as an individual. She spoke of how the current trend to researching dementia has led to increased neuropsychological testing aimed at diagnosing it, as well as the debate of how the National Health Service’s (NHS) Improving Access to Psychological Therapies (IAPT) model leads to a focus on diagnosis, all of which can negatively influence therapy:

   N: yeah, so there's the danger of especially with say the neuro stuff being involved in the scientific research, gets the grants, what becomes the focus, where's the funding where's the medication geared towards, feeds into the counselling psychologist working with the client, either through, external conscious external pressures or almost kind of implicit, erm, bias you start looking for those things, it starts effecting how you work and you miss the person [373]

4.3.2. Sub-theme 1.2 – Could we lose our CP values?

A number of discussions centred on whether there is a danger that neuroscience could lead counselling psychologists to losing their core values. Rachel highlighted the humanistic and sense making values of counselling psychology. She discussed the importance of working in an experiential and relational manner with clients:

   R: I'm not going to preach to them I’m not going to give them lots of jargon, I'm going to talk about how I experience things, so how I experience things erm, you know, as a child and growing up and as a parent and all these different things that, that go on, you know…how I make sense of that [56]

This was followed by her highlighting how a clinical colleague presents neuroscience in a dry and systematic way, something which goes against Rachel’s experiential and sense making philosophy:
R: she draws much more on that kind of expertise model and erm, and teaches about erm neuroscience in, in a much, you know, very clear, systematic, you know a very linear way… so we've had lots of conversations about needing to make it more experiential so it brings the person… so yeah, you could could get caught up in in being quite dry with it and then you’re trying to communicate about something that people can't relate to [98]

For Nancy, the concern was more explicit, she was concerned that neuroscience could lead to a medical fixation which cuts us off from our roots:

N: clients come with some sort of expectations you know that we're medical and we'll kind of provide some sort of brain solution or some sort of quick fix solution… that kind of, you know, cuts us off from our roots really… and I think science kind of feeds into that sort of thing [286-292]

4.3.3. Sub-theme 1.3 – Removing bio-fixated client's agency

The previous concern of Nancy is extended into this sub-theme. Jenny and Nancy discussed their experiences of bio-fixated clients, i.e., clients who look for a biological explanation to their problems in an attempt to remove their agency. The concern is that neuroscience, being a biological science, can potentially feed the bio-fixated client, removing their agency:

N: you know, it's your personal agency, it's not there and I think the sort of science, even though it can be helpful, you know it can, it sort of, it is a sort of, it's part of that really [328]

Jenny spoke of experiences of where she initially tried to use neuroscience information as a way of building rapport with a client, before realising that the client had latched onto the information:

J: latched onto it, wanted it to be this very, erm, medicalised view of his problems, again because it just relieved him of taking responsibility for, for doing things differently [356]
It was their crutch:

J: I suppose the medical thing was just a fence for her you know [344]

It then becomes a process of trying to bring the client into a more holistic view of the world:

J: it's then been difficult to you know, to kind of like get people to then look at things maybe from a more kind of like, relational perspective [328]…I kind of wanted to move away or help her to move away from that very medical focus and look at actually what was happening in some of her relationships and looking at the patterns [340]

4.3.4. Sub-theme 1.4 – Reductionism

For Erin, a theme entitled ‘the danger of reductionism’ emerged, in which she discussed how neuroscience could compromise the philosophy of counselling psychology and lead to a reductionist view of our clients:

E: I think we've often seen that we just deal with the mind and that neuroscience reduces people to erm, to structures in a brain and objects to be studied rather than erm, people and their emotional experience…we're really interested in the phenomenological experience of the individual rather than the, the erm, than wanting to reduce that kind of reductionist perspective [20]

Erin discussed how this could lead to a compromise of counselling psychology’s values and roots, something which echoes the discussions of Rachel and Nancy in sub-theme 1.2. This is an example of how a number of themes and sub-themes intertwined:

I: what would we be losing in particular, if, or what's the danger of what we might lose? [173]

E: …the ability to, to kind of go with what's in front of us and to be humanistic in our approach and accept people's individual experience of things, rather than being constrained by the, erm, the study of
scientific principles and whether something is, being studied by a randomised control trial [laughs] [174]

Liam discussed reductionism throughout his interview. However, it was harder to distinguish whether this was his view, or one that he felt other counselling psychologists might hold. He often spoke of reductionism as a view of others:

L: there might be a view amongst quite a lot of our colleagues that neuroscience is reductionist whereas the models of therapy are higher level more humanistic [110]

However, there were times when he himself hinted that he felt neuroscience could be reductionist:

L: erm, I think there is a risk if we got too carried away and decided that you know we're going to have some kind of a, a…a neuroscience therapy, erm, that it might be too reductionist, so it might alienate some of our colleagues

It is difficult to decipher whether he sees it as reductionist or if it is more a risk that other counselling psychologists will see it as reductionist. This aligns with the discussion in sub-theme 1.1 that participants often provided counter arguments to the dangers of neuroscience and distinguished them as something which other people may think, rather than fully identifying with the disadvantage themselves.

4.3.5. Overusing neuroscience

A number of participants discussed the danger of a counselling psychologist becoming too fixated on using neuroscience within therapy. This theme emerged particularly for Jenny and Liam. For Jenny, it linked with her discussions in sub-theme 1.3, that overusing neuroscience information could potentially reduce the client’s self-agency, as their issue becomes a biological issue outside of their locus of control. There is a particular danger that those who are new to learning neuroscience may be overly keen to take the information into therapy, making it difficult to realign a client to focus on their own autonomy and empowerment:
J: whether it's just that perhaps at first I was you know, new to kind of learning about this kind of stuff and I was just more keen to… to, to use it in, in client work and then… there's a danger that that could happen for you and for other people and some of the things we focus on as a discipline… it's difficult to pull clients back to them if they've latched on to kind of more of a biological foundation [362-367]

For Liam, his concern was that if we become too focused on scientific theory, we force it upon our clients:

L: so, yeah, I think we have to be wary of pushing theory down our client's throat [172]

Liam also highlighted that it's important not to overuse neuroscience language:

L: but saying to a client 'actually, er your B1 neuron in your hippocampus is kind of firing and connecting with your limbic structures to create a feeling of anger through your nucleus accumbens which is releasing endorphin 393 in that neuron, how do you feel about that'[134]

I: yeah [laughs] [135]

L: [laughs] you know 'oh really, okay mhm' [136]…that’s a level and language that's never probably going to work in therapy although it might for some [142]

4.3.6. Risk of half-complete knowledge

Rachel and Erin came at the danger of incomplete neuroscience knowledge from two different angles. For Rachel, much more of the focus was on neuroscience as a discipline and she highlighted her view that there is a lot that neuroscientists do not know about the brain therefore we must be careful speaking about theory as if it is 100% truth. She discussed that a lot of neuroscience theory is not based on completely defined causal links between brain and behaviour, and that a lot of theories are determined through associations:
R: everybody will stand in there saying 'oh it’s this way, it's this way, it’s that way', but actually you could see how, that with all of the neuroscience stuff that’s about now… there's all that thing about you know, it's difficult to make a cause, to make a causal link about it, its associative stuff isn’t, that there’s this kind of association and so on [138]

For Erin, the danger of incomplete neuroscience knowledge was much more focused on the counselling psychologist themselves. She discussed the danger that people become a “jack of all trades” and the neuro becomes more of a pseudoscience:

I: yeah so the risk is the danger that someone I guess wouldn't know their limits? [137]

E: yeah, and then it then turns into pseudoscience… that you kind of, just read on a superficial level and then think that you understand all of it, the underpinnings of it and just kind of really you've only got, you've only got a, a basic knowledge of it [138-140]

For Erin, this meant that practitioners risk giving out false information and misleading clients, which then becomes a question of ethics. Erin discussed this as something which occurs throughout a psychologist’s role, even in their use of therapies and as such, knowing your limits became a key theme which will be discussed further on in the analysis.
4.4. Master theme 2 - Defining neuroscience

Table 4 presents the contributors and transcript line references for each sub-theme within this master theme.

Table 4

**Defining neuroscience**

<table>
<thead>
<tr>
<th>Master Theme</th>
<th>Sub-Theme</th>
<th>Contributors</th>
<th>Key Cross References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining neuroscience</td>
<td>The study of the brain</td>
<td>Rachel, Erin, &amp; Nancy</td>
<td>Rachel: 6-8&lt;br&gt;Erin: 2-7, 40&lt;br&gt;Nancy: 4</td>
</tr>
<tr>
<td></td>
<td>Part of psychology</td>
<td>Zara &amp; Liam</td>
<td>Zara: 18-22, 28-38&lt;br&gt;Liam: 28, 70</td>
</tr>
<tr>
<td></td>
<td>Multi-levelled</td>
<td>Rachel, Jenny, &amp; Liam</td>
<td>Rachel: 8&lt;br&gt;Jenny: 8, 18-28&lt;br&gt;Liam: 32-34</td>
</tr>
</tbody>
</table>

At the beginning of each interview, I asked each participant what their view of neuroscience was. There were two primary reasons for this; one was to explore what kind of (if any) understanding and definition counselling psychologists hold for neuroscience, the second was to begin looking at what experiences have and have not led them to hold such a view, i.e., their own personal experiences in and out of their work, their training, and so forth. Additionally, understanding their definition of neuroscience also allowed me to check that I could understand their frame of reference within the interview. If they had a very abstract definition of neuroscience from what I may have expected, then it was important that I was aware and able to adjust to this within the interview, to help my interpretation of their views. Therefore, it is not surprising that a theme emerged for all participants which related to them defining neuroscience in some form. The method of learning neuroscience actually became part of a different master theme, as such this theme is very much a literal description of participants understanding of what neuroscience is.
4.4.1. Sub-theme 2.1 – The study of the brain

Rachel, Erin, and Nancy all defined neuroscience as relating to the study of the brain:

**R:** [slight laugh] It's a good question to start with. Erm, well, well I use neuroscience in, in terms of erm, because it relates to trauma, so, I use it in a particular erm, in terms of how the brain, so how a child develops, how the brain develops, how the sense of self develops, but within that still linked to the brain [6]

One of the other reasons I began with this question was that it felt like a nice way to ease into the interview, whilst also taking participants into a reflecting mind-set. The first line of Rachel’s response indicates that it is immediately taking her to a place of sense making, pondering a question that, although simple on the surface, is something she may not have necessarily consciously reflected upon so much. Erin’s response below highlighted two things, one was her distinguishing of the brain and mind, and the second was that there was perhaps some nervousness or hesitation occurring for her, given the slightly abrupt way she closed her response, mixed with the laughter:

**E:** yeah, oh, erm, right so my understanding of neuroscience is that it's the study of erm, the brain rather than the mind erm and it's the scientific study erm, yeah of the brain, is that enough [laughs] [2]

This view of psychology as the mind and neuroscience as the brain came up throughout Erin’s interview. She discussed how this has perhaps been something which has kept neuroscience and counselling psychology separate:

**E:** yeah I think erm [pause] I think we've often seen that we just deal with the mind and that neuroscience reduces people to erm, to structures in a brain and objects to be studied rather than erm, people and their emotional experience...perhaps school of counselling psychology see that as something really separate, we don't align ourselves with that kind of science [20]
However, further on in the interview, Erin also acknowledges that neuroscience and humanistic psychology overlap:

E: there feels to be a pull and a, and a divide between those two ways of thinking but actually erm, brain structures and the study of the brain underpins everything that we, that we look at so memory and cognitive functioning affects an individual’s lived experience [40]

Nancy also included the nervous system as part of her definition of neuroscience:

N: right, how do I define neuroscience, erm, my understanding of neuroscience would be, erm, that it is a study around, of, of the brain and also nervous system [4]

4.4.2. **Sub-theme 2.2 – Part of psychology**

Whilst Erin leaned towards separating neuroscience and psychology as two separate entities, both Liam and Zara suggested that neuroscience is part of psychology:

I: so it sounds in some sense you kind of feel, neuroscience should be part of counselling psychology [63]

Z: oh yes, absolutely, because it’s part of psychology [64]

She identifies a biopsychosocial approach to her working and views neuroscience as part of this:

Z: it's the biological erm, maybe slightly genetic component of what we're actually seeing presentation… but it's still got the psychological side to it… it's the bio psycho bit of the biopsychosocial [30-36]

Liam also sees neuroscience as part of the latter part of the psychology within “our” (i.e., a counselling psychologist’s) role:

L: so I think people do use lots of ideas from psychology and neuroscience is part of psychology, it's you know, it’s part of our tradition [70]
Liam described neuroscience as perhaps providing a biological explanation of behaviour:

L: okay [pause] that's quite a big question really isn't it, define neuroscience, erm, I mean, there's lots of possible answers to it, erm, on the one hand neuroscience, one might say it's the harder edged end of psychology, kind of a fusion of biopsychology and cognitive psychology [28]

There are two underlying process events in this response. The first is Liam’s confirmation that this is not necessarily a straight forward question and that it has already engaged him in sense making. The second is Liam’s slight reluctance to confirm a definitive answer, not only does he suggest that there are multiple answers, but also, the line “one might say” is not necessarily definitive nor owned by him. This occurred throughout Liam’s interview and is another indication of how participants maintained an air of caution when discussing each side of the integration stand point. Perhaps this is an indication of the multiple perspectives that counselling psychologists hold, something which was even extended into an emergent sub-theme for defining neuroscience.

4.4.3. Sub-theme 2.3 – Multi-levelled

Participants identified neuroscience as being multi-levelled. Rachel indicated that although the brain is the primary focus of study, the multi-sensory ways in which the body operates also falls under the definition of neuroscience. Jenny’s description of neuroscience involved multiple levels of study, from the high level description of the central nervous system, down to the psychological components of concepts such as memory:

J: in terms of kind of our central nervous system [4]… what is happening in the brain and brain stem [6]… the different like you know neurotransmitters and erm, yeah the kind of like, how the different areas of the brain are kind of communicating with each other [8]…how it affects kind of, erm, like more subjective things like erm, kind of like our, our memory [18]… feelings as well, and erm, how it's linked to kind of different psychopathologies [20]
Although she does not explicitly say it, there’s a sense of her describing neuroscience as part of psychology (sub-theme 2.2) as well, in terms of memory, communication and psychopathology. Following on from linking neuroscience as part of psychology, Liam also discusses neuroscience as a multi-level discipline:

L: having said that neuroscience itself probably can be divided up just like psychology can so you've got the hard bio sciency bit, the neuro imaging, PET scanning, looking at neurons [32]
### 4.5. Master theme 3 - There are ways that neuroscience can help us

Table 5 presents the contributors and transcript line references for each sub-theme within this master theme.

**Table 5**

*There are ways that neuroscience can help us*

<table>
<thead>
<tr>
<th>Master Theme</th>
<th>Sub-Theme</th>
<th>Contributors</th>
<th>Key Cross References</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are ways that neuroscience can help us</td>
<td>Empowering clients and developing rapport</td>
<td>Rachel &amp; Jenny</td>
<td>Rachel: 104-106, 112, 124&lt;br&gt;Jenny: 338, 462</td>
</tr>
<tr>
<td></td>
<td>Helping us understand the individual more</td>
<td>Rachel, Erin, &amp; Liam</td>
<td>Rachel: 16, 24, 28, 104-106, 120&lt;br&gt;Erin: 40, 44&lt;br&gt;Liam: 120, 122-126, 144, 146-152</td>
</tr>
<tr>
<td></td>
<td>Developing us as scientist-practitioner psychologists</td>
<td>Zara, Erin, &amp; Nancy</td>
<td>Zara: 36-40, 52-64, 466, 666&lt;br&gt;Erin: 104-106, 122&lt;br&gt;Nancy: 168-180</td>
</tr>
</tbody>
</table>
Each participant provided a number of examples for how neuroscience can benefit counselling psychologists. I decided to title this theme as ‘there are ways’ as there was a sense that participants were unsure whether their colleagues were currently integrating neuroscience into counselling psychology, therefore they seemed to be recommending the benefits of integration based on their own experiences rather than saying that it is actually happening across the discipline.

4.5.1. Sub-theme 3.1 – Empowering clients and developing rapport

Rachel highlighted how neuroscience can be used to empower clients:

R: it's a way of empowering, even young children, helping them to think about erm, making choices and making erm, changes [104]

Neuroscience can also develop rapport with clients, as well as help engage them in the therapeutic process:

J: you know there have just been like clients that I've worked with where it's really kind of like strengthened the relationship… and just just finding that kind of like approach that, that works for them [462]

Jenny discussed a polar opposite of client empowerment. When discussing the fact that a lot of clients come into therapy with an element of neuroscience knowledge themselves, there is a danger that a counselling psychologist who does not have any neuroscience knowledge may be disempowered:

J: you know I've given a few examples of clients who've done their own bits of research and stuff and it's not really a great thing if kind of they come in knowing more than you do [laughs] [422]

Jenny acknowledged that this might be something relating to her own insecurity as well as her awareness of not needing to be the expert; however she still felt that a lack of neuroscience knowledge could disempower counselling psychologists to clients and other staff members [426]. Rachel also discussed the regular occurrence of neuroscience informed clients and that having her own understanding of neuroscience allowed her to have a dialogue with these clients (parents):
R: they have their own, and they read books as well, you know erm, the parents that I work with are all avid readers… you know, they're always, they're always reading all sorts of books on, on attachment and, and neuroscience stuff and so on, so, we have a dialogue [82]

4.5.2. Sub-theme 3.2 – Helping us understand the individual more

Given that a number of participants described neuroscience as an additional, biological way of understanding people, it makes sense that neuroscience can be something which helps us in our work to understand our clients. It should be noted that the word ‘individual’ has been used in the title; this is to highlight that participants acknowledged counselling psychology’s focus on the individual, subjective experience. Therefore, we can use neuroscience to add to our philosophy, rather than change it. Rachel discussed how neuroscience helps her and the client make sense of the self:

R: the sense of self can help support and can help me understand what's going on and can help them think about it but I think that the neuroscience erm, gives the tools that they can, actually make sense of it [120]

For Erin, neuroscience helps develop our understanding of human experience:

E: I don't think you can kind of further understanding of the human experience without understanding about the brain and bringing in all the theories that neuroscience contributes to that [40]

Something which feeds into her work:

I: how does it kind of do you feel it feeds in to your work? [43]

E: for my understanding and when explaining to young people and the adults that work with young people as well, about how a young person’s experience might have impacted on their brain development and their kind of future, blueprints for relationships and ways of relating to people [44]

For Liam, neuroscience may add theory which helps develop understanding:
the reason why I think neuroscience might be helpful is that it might help us to think in more detail and at more theoretical levels and more precisely about what's happening for clients [120]

Following this, he then enters into a discussion on how neuroscience may help with EMDR as an example [120-126].

4.5.3. Sub-theme 3.3 – Rationale for interventions: to colleagues and clients

There were two common discussions of how neuroscience helped inform our work and provide a rationale for what we were doing. This was broken down into two aspects, clients and colleagues, often within the same participant. For example, Rachel spoke of how psychodynamic neuroscience supported the idea of being present in the room:

R: I came across the psychodynamic literature where they were drawing on neuropsych erm theories and they were talking about it's not actually the talk we do in the therapy room, it's how we are, it’s being in the room [132]

Both Nancy and Jenny spoke of how they use neuroscience to provide clients confidence and belief in trauma focused therapy and depression:

J: if you can explain from a neuroscience point of view [214]… I think that provides like a really good rationale for, for what you want to do… with something that is, you know inevitably going to be really difficult for people but I think it helps them see that it’s going to be worth it [220-222]

N: you know you could talk about the kind of sense of achievement or mastering pleasure but then you know you can also talk about how that has an impact on chemistry… on your brain, you know and this is an important aspect of working with depression, so that would be like a rationale [90-92]

Zara discussed a particular example of how neuroscience provided a rationale for clients and colleagues, informing intervention and formulation:
Z: so I could ask the question where was the bleed, and know because they said it was in her temporal lobe… that actually that might be part of the reason that she just came out with that… and then explain that to the team… it, it helped them empathise with her, it helped us assess the risk, sensibly… and it meant that the whole team had the shared understanding of what the presentation was about so it helped with the formulation [174-182]

4.5.4. Sub-theme 3.4 – Developing us as scientist practitioners

Following on from the idea that neuroscience can provide a scientific rationale for counselling psychologists’ interventions, Zara, Erin, and Nancy highlighted our identity as scientist practitioners and how neuroscience can help us develop this aspect of a counselling psychologist’s work. Zara suggested that both the reflexive and scientist practitioner is needed within counselling psychology:

Z: the Rogerian approach, you've got the necessary and sufficient, of your core, erm, values… now my experience is yes they are necessary but no they're not sufficient… and the sufficient stuff comes from the evidence based practice [470-478]

This view is echoed somewhat by Erin, who links this sub-theme and the previous sub-theme by highlighting how neuroscience provides scientific rationale and credibility of our work to colleagues:

E: I suppose being able to talk confidently about 'well we, we're offering this psychological approach because what we know is that it has this impact on certain areas of the brain'…and actually that, you know kind of giving, giving confidence and credibility to the interventions that we provide and also to showing that, erm, that we are the like kind of scientist practitioner psychologist and kind of, bringing in more science [104]

Zara discusses her view on clinical psychology being more comfortable with engaging the scientist side, and that this is something which we need to bring into counselling psychology:
one of the differences between clinical and counselling psychology is clinical psychologists overtly say we are scientist practitioners and when I was training we said we are reflective practitioners, that's not enough on its own [470]

A view which is echoed by Erin:

coz I always see kind of counselling psychologists we emphasise that practitioner whereas clinical psychologists and other erm professions might erm, emphasise the scientist part… so I suppose it might give us erm, a bit more confidence in being in that scientist practitioner world [104-106]

For Erin, this in turn increases our credibility to both clients and colleagues [107-110]. Nancy discussed how everything stems from the body, including thoughts and feelings, so an understanding of body science informs our work as practitioners [168-180].

**4.5.5. Sub-theme 3.5 – A language to unite and support us in MDTs**

Continuing the theme of neuroscience helping counselling psychologists engage in scientific dialogue as well as informing their formulations and interventions, a number of participants also discussed how neuroscience provides a language of commonality for multidisciplinary team (MDT) working. Rachel had already discussed the role of neuroscience in communicating with clients, but she also provided examples of where neuroscience forms part of her team meetings:

when we do the assessments, we do the WAIS, er the WISC, and lots of other psychometrics, and erm, we'll always look at the cognitive profile to see if there's other things in there as well we don't always, but we can also say well these kids have had this kind of history so far, developmental trauma has got to be there because they've had a traumatic life history so far [166]

Zara was very passionate about the benefit of neuroscience in MDT working:
Z: I've got to have a shared language with all the other professionals that I work with [110]… to actually convey what we mean in a way that people can understand [120]

She sees it as a way for us to be able to put our view across:

Z: if one of my arguments in an MDT a multi-disciplinary team setting is, let’s not keep keep using chemicals with this person because we don’t know necessarily what they're doing and the long term impacts are so harmful, that won’t be heard unless I've got an understanding of how the chemicals work on the person… you can't go into a debate and expect people to listen to you if you don't understand their side of the argument [135-140]

Jenny acknowledged the role of neuroscience as a bridge to her MDT colleagues in lines [58-70] as well as below:

J: we are working kind of like MDT environments and I think it is important to be able to just erm, understand what other people are talking about, whether it's looking at the results of a CT scan or, or, you know, whatever, erm, being able to kind of like contribute in meetings and being able to communicate to others how… biological, erm, kind of perspective, how, you know what impact that might have on people [420]

Erin provided an example of where a neuroscientific understanding helped her debate her colleague’s view that neuroplasticity did not exist; neuroplasticity is one of the mechanisms for change within therapy, therefore, Erin’s defence of this concept was also a defence of the counselling psychology profession:

E: I always remember erm, it was a psychiatrist I was working with and he said 'well there is no such thing as neural plasticity and we can't change any of that' and I just thought what, what's the point in our job then and what are we doing to erm, if we're saying that that's just, that's set in stone and there's no reversing then erm, or kind of changing of neural pathways then what are we all doing [laughs] [66]
4.6. Master theme 4 – Methods of learning and the need for training

Table 6

**Methods of learning and the need for training**

<table>
<thead>
<tr>
<th>Master Theme</th>
<th>Sub-Theme</th>
<th>Contributors</th>
<th>Key Cross References</th>
</tr>
</thead>
</table>
| Methods of learning and the need for training | How I have learnt neuroscience so far | All | Rachel: 12-16, 88, 132  
| | | | Zara: 8, 60, 131, 134, 332  
| | | | Jenny: 16, 40, 196-198, 485  
| | | | Erin: 48-58  
| | | | Liam: 48, 72-80, 196, 210  
| | | | Nancy: 188-190, 454-456, 468 |
| | Neuroscience not taught on doctorates | Rachel, Zara, Jenny, Erin, & Liam | Rachel: 72, 86  
| | | | Zara: 60-62, 129-130  
| | | | Jenny: 90, 109-112, 486-490  
| | | | Erin: 58, 210  
| | | | Liam: 110-114 |
| | The challenges of learning neuroscience | Zara, Jenny, Erin, & Nancy | Zara: 408, 496-502, 602  
| | | | Jenny: 44, 90, 109, 468-470  
| | | | Erin: 58, 84, 88, 132, 210  
| | | | Nancy: 190-196, 416-422 |
| | We need neuroscience in doctorate and CPD training | Zara, Jenny, Liam, & Nancy | Zara: 502-506, 522, 678  
| | | | Jenny: 109, 404, 476-478, 490  
| | | | Liam: 84-90  
| | | | Nancy: 262 |
| | Methods of implementing neuroscience into our training | All | Rachel: 98  
| | | | Zara: 512-514, 546-554, 586  
| | | | Jenny: 478, 488-504  
| | | | Erin: 14-16, 160-164  
| | | | Liam: 90  
| | | | Nancy: 476-486 |
Table 6 above presents the contributors and transcript line references for each sub-theme within this master theme.

There were a number of themes which emerged in relation to training. These themes involved discussions on how participants had currently undertaken learning in neuroscience, the challenges of learning neuroscience, the need for neuroscience training within counselling psychology, and suggestions of how this training could be implemented. These sub-themes are broader than those in other master themes. This is because there are a wide variety of emergent themes within each category. As such, the explanation of each sub-theme below helps to unveil the particulars within this section.

4.6.1. **Sub-theme 4.1 – How I have learnt neuroscience so far**

Each participant discussed ways in which they have undertaken neuroscience learning. Methods of learning included conferences, talks, books, journal articles, thesis research, webinars, undergraduate and master’s degrees, placements, workplace, and colleagues. A number of participants also highlighted that they did not initially seek to learn neuroscience; it was just such a big part of their area of interest that they could not ignore it:

E: I suppose if, if those areas of practice hadn't indicated that there was neuro or a link with neuroscience I don't know whether I really would have gone 'well I really want to learn about' [48]

R: I didn’t purposefully, I didn't expect that I would but it was around for me of course and yeah, that’s just where the thesis erm, went off to, took me really, I was very open [22]… it’s not really naturally my way… I'm interested in a lot of things but, I wouldn't have naturally been drawn to something like that, I'm much more about sort of you know, metaphor [138]

Jenny noted that client feedback has been a great way for her to learn about neuroscience. Working in research, she has had the chance to get feedback from participants on using neuroscience material:
J: and it was just really well received so because I’ve had that positive feedback… from quite a large group of women… then that gives me more confidence to use it going forward

4.6.2. Sub-theme 4.2 – Neuroscience not taught on doctorates

Each participant discussed the lack of neuroscience in their formal counselling psychology training. Rachel, Zara, Jenny, and Erin have all undertaken the professional doctorate in counselling psychology and highlighted the fact that there was very limited, if any, neuroscience related training on their course. Rachel discussed that her supervisor was almost anti-neuroscience and tried to steer her away from it:

R: yeah, I mean, erm, you know that's what Vincent was constantly saying to me when I was trying to write up my thesis, he was arguing about it being reductionist and didn't really want me to be pursuing that [72]

Z: my course that I was on, most of my knowledge comes from my undergrad, not my post grad [60]

E: yeah it was undergrad psychology … but I don't remember doing at the doctoral level on my counselling psychology course [58]

Jenny mentioned that there were some brief experiences of neuropsychology training on her course, however, not enough:

J: no, I don't think there was at all, erm, I'm just trying to think… I was really kind of, spent a lot of time reading up on, on the, on the kind of like neuropsychology stuff coz we had a couple of lectures on our course but that was pretty much it [90]

Liam is a lecturer in counselling psychology and discussed the possibility of neuroscience as a tool for teaching integration on courses; however, his experiences have led him to suspect that there may be some resistance to this:

L: so I suspect the guidance most courses would choose to give will not be around neuroscience as an integration [106]
Nancy undertook the independent route to qualification, therefore there was little
discussion of the doctorate training in her interview, however, she did discuss that
there was no module requirement for neuroscience in her training, which meant that
she was not required to learn about it [472-478].

4.6.3. **Sub-theme 4.3 – The challenges of learning neuroscience**

A number of themes emerged in relation to the challenges and difficulties of learning
neuroscience. It should be noted that the previous sub-theme of having no
neuroscience on the doctorate could fall under this category; however, the fact that it
was so prevalent in the data meant that it emerged as its own sub-theme. A number
of participants discussed how neuroscience can be inaccessible, in terms of being a
dry and difficult language to comprehend:

J: when I first started to learn about neuroscience it was just very dry,
very heavy going and really difficult to see how it related to
psychology because it was just too, it was just kind of like, the
terminology was just too medical [468]

N: it's too complicated, too, erm, the words are terrible… I don't know,
you know it seems like so convoluted and complicated, erm, I don't
know if the mystery around it is kept on purpose, erm, the difficult
words [414-416]

It was suggested that given the inaccessibility of neuroscience language, there is a
lack of neuro-related reading material focused towards counselling psychologists:

E: so lack of training, lack of available reading materials, that would
appeal to counselling psychologists perhaps [210]

Zara highlighted the difficulty of time constraints in teaching:

Z: unless, it [pause] it would reduce the amount of time that was spent
on learning the therapies… and something’s got to give hasn't it [408-
410]
Zara highlighted that counselling psychology is still a relatively young discipline that continues to feel the need to develop and establish its identity. This means that it often silos itself off which may prevent it from integrating with other disciplines:

\[ Z: \] I still think there's that quite sort of silo'd approach to it like 'counselling psychology we'll lose our identity' … so that, trying to establish that identity resulting in a potential kind of fear or an, not inviting other disciplines in and not inviting that integration [602]

One last challenge to mention also came from Zara. If counselling psychology started teaching neuroscience in its training, then it may create a schism within the profession. Those receiving the training would be better placed for jobs than those without [496-502]. As a result, the challenge becomes ensuring that neuroscience is taught across the board, to trainee and qualified counselling psychologists.

4.6.4. Sub-theme 4.4 – We need neuroscience in doctorate and CPD training

The challenge highlighted in the previous paragraph came up for a number of participants and was something that influenced the title of this sub-theme. Not only did participants discuss the need for neuroscience training in counselling psychology, but they also spoke of training across the board, including continued professional development (CPD) events for qualified practitioners:

\[ I: \] so a challenge would be almost getting it across the board the training as well [501]

\[ Z: \] yeah absolutely… I'd be up for the, that'd be great [laughs], bit of CPD in there [502-504]

Conferences were suggested as another method of teaching:

\[ J: \] as I said you know incorporating more of it on our training programmes… I think that's like an obvious place that it needs to be more integrated… it'd be nice to have more kind of, erm, presence in kind of like, you know conferences and things like that [476-478]

Nancy discussed a wish for more neuropsychology testing within her training:
N: but I wish, you know I would have loved to learn a little bit more about assessing, you know, people, or sort of memory, because I know people struggle [262]

Liam was unsure on this subject. On the one hand he felt that perhaps counselling psychology is not teaching neuroscience and yet on the other, he felt that training centres are beginning to teach about the basic implications that neuroscience can have for counselling psychology [84].

4.6.5. Sub-theme 4.5 – Methods of implementing neuroscience into our training

Following on from the need to integrate neuroscience into counselling psychology training, a theme emerged in which participants discussed methods in which the training can be implemented. Zara and Jenny discussed that there may be a lack of expertise on the subject within counselling psychology; therefore, utilising established neuroscience resources may be of benefit, especially if it allows training to match with neuropsychology competencies:

J: when they didn't have, maybe there wasn't you know a full-time member of staff who had expertise in a certain area, they brought other people in so… it’s overcome in, you know for other topics so [504-506]

Z: we need to get that right because what we need to do is then be talking to the neuropsychology courses… so that what we're learning is consistent with what they're teaching [546-548]

Given the challenge of neuroscience being dry and inaccessible, experiential case studies and learning was also advised:

R: we've had lots of conversations about needing to make it more experiential so it brings the person in [98]

J: we don't have to do it in a really boring and dry way you know, you can use kind of like case studies and stuff and, and ask people to you know bring their own examples and that kind of thing so I think you can make it a lot more relevant [478]
Liam feels that it is important to teach integration on training courses and suggested neuroscience as a vehicle for integration:

L: some centres do that as well, try and get students to think about how they integrate the different ideas they've been exposed to and one vehicle for doing that might be neuroscience [90]

Zara and Nancy both discussed the role of competency requirements as an influence on the counselling psychology curriculum. Zara suggested that it is important that any training, doctoral or CPD, is tailored towards meeting the competency requirements of the HCPC and of employer job specifications:

Z: it would need to be reflected in competencies, so we'd have to be looking at right in order to call yourself counselling psychologists what competencies do you need [512]

Erin focused on the importance of teaching counselling psychologists how to work within their knowledge limits when using neuroscience. We should teach neuroscience, but we should teach how to use it safely:

E: even if it is just a, a session on the world of neuroscience and where the, you know where the boundaries lay around it, and increasing people’s knowledge and understanding or where to get extra, more information [160]
4.7. Master theme 5 – Integration: The opposition and the need - finding the balance

Table 7 presents the contributors and transcript line references for each sub-theme within this master theme.

Table 7

Integration: The opposition and the need - finding the balance

<table>
<thead>
<tr>
<th>Master Theme</th>
<th>Sub-Theme</th>
<th>Contributors</th>
<th>Key Cross References</th>
</tr>
</thead>
</table>
| Integration: The opposition and the need - finding the balance | Lack of integration thus far…fear of losing identity? | Rachel, Zara, Jenny, & Erin | Rachel: 188  
Zara: 432-448, 492-494  
Jenny: 390-392  
Erin: 14, 22-28 |
| | Too much counselling, not enough psychology | Zara & Liam | Zara: 46, 64, 414, 444, 632  
Liam: 16, 42, 44-48, 208, 214 |
| | Overall, neuroscience is good for counselling psychology | Rachel, Zara, Jenny, Erin, & Liam | Rachel: 138-140, 188  
Zara: 63-64, 153-154  
Jenny: 54  
Erin: 14, 22-4, 40, 286  
Liam: 84, 180 |
| | It is all about integration, that is what we do | Rachel, Zara, Jenny, & Erin | Rachel: 52-54, 154  
Zara: 218, 410-414, 480-482, 724  
Jenny: 54, 94, 392  
Erin: 40, 180, 196-198 |
| | We integrate neuroscience, but according to the client | Rachel, Jenny, Liam, & Nancy | Rachel: 76, 94  
Jenny: 244, 248-266  
Liam: 116, 130-142, 172, 176  
Nancy: 96-98, 552, 558 |
Master themes 1 and 3 have presented discussions relating to the dangers and benefits of integrating neuroscience into counselling psychology. Whilst master theme 4 began entering into a discussion of how these opposing views can be negotiated, it was restricted solely to the learning and teaching of neuroscience. This master theme presents participants’ overall views on what the oppositions to neuroscience may be in counselling psychology, the need for the integration to occur, along with the manner in which this can be done.

4.7.1. **Sub-theme 5.1– Lack of integration thus far…fear of losing identity?**

Rachel, Zara, Jenny, and Erin all discussed that there is perhaps a lack of integration thus far between counselling psychology and neuroscience. One reason that was often suggested related to a fear of losing identity. Participants highlighted that counselling psychology has been focused on establishing its identity through the years and there is perhaps a worry among counselling psychologists that if they embrace neuroscience and become involved in that form of science, they will lose their identity:

I: right, what do you feel that resistance would be? [433]

Z: a fear, a fear of losing identity… a fear of losing what makes a counselling psychologist distinctive from a clinical one… erm, but I think it's an unfounded fear [434-436]

Zara then elaborated on particular groups within counselling psychology where she felt this fear may occur, suggesting the reason for it:

Z: when I speak to people who are really into the existential side of things they don't welcome the science so much, right, because they, I think, because they fear that the science will, will damage their ability to go further down that route [444]

Jenny and Erin discussed how counselling psychologists may struggle to see how neuroscience sits with their philosophy:
J: can see how perhaps some people or some counselling psychologists might be a bit resistant erm, and maybe struggle to see how it kind of like fits with, with our sort of humanistic foundations [390]

E: counselling psychologists have been really, erm, trying to…set out their identities specifically in the UK and we, we kind of really highlight our philosophical underpinnings and that's where, you know humanistic and that's where we come from and that's how we build our identity [26]

Erin suggests that counselling psychology may have been reductionist in itself, by alienating other disciplines such as neuroscience:

E: we've kind of built a rod for our own back in certain ways… we've kind of had to in a way reduce ourselves to this is what makes us different to everyone else… but, has that set us too far apart… that's quite reductionist coz it, it kind of separates you out from other schools of study, schools of thought [26-30]

4.7.2. *Sub-theme 5.2– Too much counselling, not enough psychology*

Liam’s view is that too many counselling psychologists think about counselling and psychotherapy and do not identify enough as psychologists:

L: lot of our colleagues seem to think that we're not really psychologic, that we're actually psychotherapists… I think there's a lot of counselling psychologists that labour under the delusion that they're actually psychoanalysts [44-46]

L: I've always argued and I think a lot of counselling psychologists do agree with me, that we are psychologists fundamentally [56]

This viewpoint was strongly echoed by Zara:

Z: if I put my cards on the table to start with, I am a counselling psychologist but I do sometimes have a problem with counselling psychology in that it’s far too much counselling and not enough psychology [44]
There’s something about the statement of putting her cards on the table which suggests that Zara is passionate about this view but is mindful that it is quite a headline statement. The importance of this view for her is demonstrated in its reoccurrence throughout the interview:

Z: there’s a fluffy bunny element to some counselling psychologists, where there’s a lot of erm, existential stuff going on…that’s where the too much counselling and too little psychology comes in because for me the psychology side is the science side that informs how we do the therapy [442]

Z: if we want to call ourselves psychologists, psychology is a science…you can’t throw the science out or ignore it, if you want, you know, fine be a counsellor, be a psychotherapist, be a whatever, but the science is really really important, because, without the science, why would we expect anybody to take us seriously [464]

4.7.3. Sub-theme 5.3– Overall, neuroscience is good for counselling psychology

I initially called this theme ‘counselling psychology needs neuroscience’ however it did not feel like the best representative statement. Five of the six participants described neuroscience as being an overall positive thing for counselling psychology. There were two distinct levels. The first was Rachel and Zara’s views that counselling psychology needs neuroscience:

R: I think it needs people like yourself perhaps to you know, to, to go ahead and and and, drive this forwards…it’s just an essential way…I can appreciate that it might not be there for, you know, in everybody’s clinical work but I find it essential [188]

Z: oh yes, absolutely, because it’s part of psychology [64]

For Jenny and Liam, whilst they were not so vociferous in the essential need for integrating neuroscience, they still felt it had overall positive benefits:

J: overall, erm, I think, it is a positive thing if we can integrate it more into counselling psychology [54]
I tend to see the idea of thinking about and using neuroscience and it being part of psychology and part of what we should be doing as, you know it's, more on the positive side than the negative [180]

Erin was in-between these two viewpoints:

E: we need to understand both aspects in order to fully understand the whole person really and I think that neuroscience can contribute a lot to counselling psychology [14]

E: it's solidified in my mind the value of using it, erm, but perhaps a bit more about the erm, thinking about the limitations of using it [286]

There was no explicit theme which emerged from Nancy on this topic, she provided pro’s and con’s for integration, but I did not interpret a distinct overall view from her data.

4.7.4. **Sub-theme 5.4—It is all about integration, that is what we do**

A number of discussions and themes emerged in which participants spoke of the importance of integration for implementing neuroscience. Integrating is a skill that counselling psychologists hold, therefore, who better to find the right balance for using neuroscience:

J: you can incorporate it and I think that's part of our, our skill is how we can use it so it kind of adds to it rather than takes away from it [392]

E: the benefits of being a counselling psychologist is that you, that you do stand back and you look at all of those viewpoints and you do need to therefore bring in neuroscience and those types of things but be mindful of what it also doesn't tell you about something [180]

Z: but then you can integrate it into learning the therapies…that actually can enhance it rather than being a disadvantage and taking away from it [410]
4.7.5. **Sub-theme 5.5—We integrate neuroscience, but according to the client**

Whilst sub-theme 4.5 focused on methods for implementing neuroscience into counselling psychology training, this sub-theme focuses more on how neuroscience can be implemented into the overall practice of a counselling psychologist, particularly with clients. All participants felt that neuroscience can be useful, but it must be used and communicated on a client by client basis, in a way that feels right for the individual:

R: I just think that once we then communicate with people it, it can be done in a, in a very user friendly way, because we can relate to their experiences and help them make sense… and we make sense of it through the neuroscience, and then I would say okay, so we think about it from a person centred point of view and a neuroscience point of view, what can we then do to help that child [76]

Liam spoke of communicating neuroscience in different manners for different clients, as well as suggesting that neuroscience can be used as a theoretical underpinning for work, without necessarily having to be communicated:

L: you need to tailor the right language and narrative to the client, some clients will talk using one language and others and there may be clients who will really happily talk in a sort of neuroscience type language but possibly not that many [130]

L: yeah, I think we have to be wary of pushing theory down our clients’ throat and I think most therapists use theory in a, you know it's part of what they're doing when they're with clients but they're not explicitly using it with the client it's in the background [172]

A similar view occurred for Nancy; her experiences have led her to see the positive use for neuroscience, but it must be tailored to the individual client:

N: personally I think that, used, used, you know in a kind of sensitive way for the appropriate client that obviously would be very helpful, erm, but you know, kind of, just going with the bulldozer…no [552-554]
This approach allows counselling psychologists to integrate using therapy skills such as metaphor and client feedback:

J: yeah so I would usually use that, yeah the kind of metaphor with most people then if people are interested in that and take to that… yeah so the client's feedback, and you just pick up on those things [261-266]

4.8. Master theme 6 – My practitioner identity

Table 8 presents the contributors and transcript line references for each sub-theme within this master theme.

Table 8

<table>
<thead>
<tr>
<th>Master Theme</th>
<th>Sub-Theme</th>
<th>Contributors</th>
<th>Key Cross References</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A pragmatic approach to work</td>
<td>Zara &amp; Liam</td>
<td>Zara: 102, 356, 368 Liam: 144</td>
</tr>
</tbody>
</table>

Participants discussed their identities as a practitioner throughout the interviews. This was often in relation to how they shaped their world view of clients and humans.

4.8.1. Sub-theme 6.1 – I am a counselling Psychologist

Participants often discussed their identity as a counselling psychologist. The P of psychologist is capitalised to demonstrate that the majority of participants
highlighted the psychologist part of their title, whilst at other times acknowledging their identity as a humanistic practitioner:

R: I was never comfortable with clinical psychology and that kind of expertise you know model, coz I always felt that we had to have erm, a much more relational approach [64]…although I, like the identity of counselling psychology, erm, I think I just see myself as psychologist up here [182]

J: you know, there's been clinical psychologists working with the team previously and I'm doing the same job effectively…I feel like a counselling psychologist so that's, you know that's, that's kind of like the most important thing I suppose [290-298]

Erin uses a collective ‘we’ to demonstrate a strong sense of identity as a counselling psychologist, whilst later acknowledging a collective ‘we’ in her identity as an applied psychologist:

E: so we've kind of, we I'm talking about collective perhaps school of counselling psychology… we're really interested in the phenomenological experience of the individual [20]…we're all applied psychologists, we all have different areas of interest [230]

Zara confirms her identity as a counselling psychologist and one of the reasons that she feels this identity:

I: do you feel that you're a counselling psychologist? [151]

Z: oh yes… I'm a huge believer in bringing people alongside and taking them with you [152-158]… therapy's my first love [728]

Zara then confirms that she is a psychologist first and foremost, and that counselling is the type of psychology that she undertakes:

Z: we're psychologists first, it's the type of psychology that we practice which is the counselling bit, but we're psychologists first [642]

Of all the participants, Nancy was the one who emphasised her psychologist side the least, and generally spoke of her identity as that of a counselling psychologist:
so you know, from, from my point of view as a counselling psychologist, that's a big thing [384]

Although there were no specific emergent themes from Liam’s data which sat directly with this sub-theme, his views in sub-theme 5.2 seem relevant to this section:

L: I've always argued and I think a lot of counselling psychologists do agree with me, that we are psychologists fundamentally [56]

4.8.2. **Sub-theme 6.2 – A pragmatic approach**

A pragmatic approach was something which emerged from Zara and Liam’s data, as in a sense of doing what is right for the client, rather than closing the door on specific theories or tools. Zara spoke of psychometrics and how, although some counselling psychologists may be against them, she uses them, because they help:

Z: when I was training which wasn't that long ago and I finished 5 years ago, there was still the debate going on should we use psychometrics, should we use diagnosis, it’s a sort of null and void debate because you can choose not to but if you want to be part of the mainstream system and help people you need to [106]

Liam’s sense of pragmatism came to me when he was discussing the benefit of being open to something new like neuroscience, as it can help develop our understanding of humans, which can then even feed back into our therapeutic work:

L: that would enable us to make much more precise fine-tuned hypotheses and predictions that we can then research and… feed back into therapy at some point [144]

4.9. **Converging and diverging with existing literature**

The previous section presented my findings from the perspective of both interviewer and participant, with more focus given to the participants’ words. In this section, I discuss how my findings relate to existing literature, highlighting any new avenues of learning which have been created by my analysis. The master theme under
It should be noted that I have not included my own article (Goss, 2015b) in the discussions of how my themes converge with existing literature. The reason for this is that the article contained a number of my personal views on the integration of neuroscience into counselling psychology. I have tried to keep my paradigm views as bracketed as possible throughout this research. As such, it would seem wrong to use my own previous views as a foundation for discussing my own current analysis; however I reintroduce Goss (2015b) into discussions within chapter 5.

4.9.1. There are ways that neuroscience can help us

This sub theme focused on the benefits that neuroscience can offer counselling psychology. The themes can be grouped into two distinct discussions.

**Empowering clients and building rapport**

*Rationale for interventions – to colleagues and clients*

*A language to unite and support us in MDT’s*

There were a group of sub-themes which were united in their discussions of neuroscience as an extra language. Participants suggested that by familiarising themselves with neuroscientific literature, they could begin to communicate on additional levels, with both clients and colleagues.

Jenny proposed that neuroscience can be used as a way of developing rapport with clients, presenting information in an alternative way which may help some clients’ understanding, particularly if the client is more scientifically minded. Although Coutinho et al. (2014) discussed that a neuroscientific understanding of empathy can help counselling psychologists develop their therapeutic skills and rapport, the existing literature does not appear to highlight this notion of developing rapport through the use of neuroscience language in itself, suggesting that Jenny has highlighted a key benefit which has not been previously recognised within
Rachel discussed how neuroscience empowers clients, especially young children, helping them to think about their choices and actions in life. This view relates to Sampaio and Lifter’s (2014) suggestion that understanding the neural correlates of infant mental health can directly inform how counselling psychologists work with children and their caregivers, something also proposed by Fine and Sung (2014). These proposals potentially demonstrate that counselling psychologists can utilise neuroscience across all client demographics, with the participants’ experiences providing ecological evidence of the previous literature.

The use of neuroscience as a rationale for counselling psychology interventions was discussed by a number of participants. This parallels discussions across a number of publications in the American literature on integrating neuropsychology (Kemp, 1992) and neuroscience (Coutinho et al., 2014; Fine & Sung; 2014; Gonçalves & Perrone-McGovern, 2014; Sampaio & Lifter, 2014; Simon-Dack & Marmarosh, 2014; Wright & Diaz, 2014). Within the UK literature, Rizq (2007) suggested that neuroscience can help develop psychotherapy interventions; however, she was not explicit in discussing it as a rationale for interventions. Therefore, this research helps confirm that there is a similarity in views between the UK and USA in terms of neuroscience helping to provide a rationale for client interventions. One thing that the present work helps expand upon is the notion that this rationale can be provided not only to clients, but also to colleagues, particularly those of a medical persuasion. This links into a sub-theme which related to a number of participants proposing that neuroscience can be a language to unite and support counselling psychologists working with other professionals in multi-disciplinary team (MDT) environments. It was suggested that if counselling psychologists learn to speak and understand the language of neuroscience, not only can they be on the same wavelength as psychiatrists and other medically orientated psychologists, but they can use the language of neuroscience to support their rationale for psychological interventions. Fairfax (2007) discussed his personal experience of initially struggling to grapple with neuroscience and neuropsychology terminology, but once he did, he began to appreciate that the medical view of his colleagues is an additional part of the holistic world of a client. Somewhat related to all of the sub-themes in this discussion, Larson (1992) argued that an increased knowledge in neuropsychology provides
further information for therapeutic work. Larson (1992) also proposed that if counselling psychologists are able to speak the language of neuropsychology and neuroscience, they can undertake a number of communication roles within hospital settings including psychoeducating clients and their families by interpreting neurologist data, discussing how assessed deficits may impact their subjective experience, as well as mediating conflicts which may arise between patient and consultant. Counselling psychologists can also provide support for the adjustments that the client and family will have to make (Sampaio & Lifter, 2014). This supports the experiences of Rachel and Erin, who often use neuroscience to support their communication with educational stakeholders, caregivers, and families. There was one nuance of using neuroscience as an MDT language which was not evident in the existing literature. This was around Zara’s experience of using neuroscience to educate nursing staff and colleagues within in-patient settings. By educating staff on why clients may behave in a certain way, Zara finds that she can empower staff to offer more empathy and positive input towards clients.

**Developing us as scientist practitioners**

**Helping us understand the individual more**

A sub-theme emerged relating to participants viewing neuroscience as informing the scientist-practitioner aspect of counselling psychologists’ work. The scientist-practitioner model emphasises the role of the counselling psychologist in producing and using evidence based psychological theory and research within all aspects of their work, and is a key part of the professional identity (Lane & Corrie, 2006). It is something which distinguishes counselling psychologists from psychotherapists (Strawbridge & Woolfe, 2010). The views of Zara, Erin, and Nancy support that which was proposed by Agresti (1992), namely that increased neuroscientific understanding feeds into increasing our scientist-practitioner evidence base.

As discussed in the previous section, Fairfax (2007) suggested that an increased understanding of neuroscience (neuropsychology) develops an increased holistic view of a person. Additional to Fairfax, Rizq (2007) proposed that a biological perspective is necessary, along with a phenomenological perspective, to understand the whole of a person. These views were mirrored by a number of participants who
felt that neuroscience can help us understand the individual more. A key note on the wording for this sub-theme was the word individual. Whilst participants proposed the benefit of neuroscience for understanding people, they maintained the counselling psychology focus on working with individuals, something which I wanted to highlight in the sub-theme title.

4.9.2. The dangers of neuroscience

This theme discussed the various challenges to integrating neuroscience into counselling psychology. I opted for the word ‘danger’ as I wanted to highlight that participants raised concerns about integration, however, they also proposed these concerns as something which could be overcome and therefore they were not unavoidable negatives. Although there were six sub-themes which emerged for this subject, there is a large amount of interaction among the sub-themes. There were three distinct discussions across this master theme:

Reductionism

A risk to therapy

Removing bio-fixated client’s agency

The first discussion relates to the potential reductionist aspect of neuroscience and how this could impact on counselling psychology and psychotherapy. Participants discussed how neuroscience could potentially be seen as reducing the client to an object, not a subjective person. This supports Rizq’s (2007) suggestion that some counselling psychologists may fear that neuroscience will diminish the complexity and position of psychotherapy, reducing clients to objects. This fear of reductionism was also proposed within the psychotherapy literature (Farmer, 2009; Fuchs, 2004; Ivey & Zalaquett, 2011). The reductionist approach of neuroscience could pose a threat to counselling psychology in two key ways. Fuchs (2004) proposed that a reductionist biological view of clients may lead people to lose agency and will to change, their problems become ones of faulty neurons rather than challenges to face. This argument is also highlighted in Jenny and Nancy’s discussion on neuroscience leading to the removal of a biologically-fixated client’s agency. There is a danger that clients latch onto a biological explanation of their problems, which removes their agency, leading them to become passive in their therapeutic work. A second
angle of reductionism is the risk it poses to psychotherapy as an intervention. Psychotherapy is a big part of the counselling psychology identity (British Psychological Society, 2005). Zara and Nancy highlighted the potential danger that an increase of neuroscience could lead to a decrease of psychological interventions. The science could feed the pathology and pharmaceutical model, reducing the investment and time given to psychological therapies. Therefore, in some sense, participants were highlighting the question as to whether counselling psychology wants to work alongside something which could help destroy it. This view did not appear to be explicitly discussed within the existing literature. Whilst there were discussions on neuroscience potentially leading to an increased medical view, there did not appear to be specific statements around neuroscience leading to the elimination of therapy, suggesting that this could raise a new and valid challenge to be acknowledged around the paradigm.

**Could we lose our CP values?**

The second discussion of danger was around the counselling psychology identity, with suggestions made that some counselling psychologists may fear that embracing neuroscience will take them away from their humanistic roots. This topic links with the reductionist discussions above. This identity topic was discussed in the American literature on integrating counselling psychology and neuropsychology (Agresti, 1992; Ryan et al., 1999). However the question mark is a vital part of this sub-theme title. Discussions on this topic, both by my participants and in existing literature, are always somewhat open ended suggestions. Rather than anybody stating that counselling psychology will certainly lose its values by embracing neuroscience, it is often a suggestion that ‘some’ counselling psychologists may think this could happen. However, Nancy was clear in stating that client’s expectancy of a medical brain solution can cut counselling psychologists off from bringing their philosophical roots into the therapeutic work, and she suggested that neuroscience can feed into this. Therefore, this research gives voice to the ‘some’.
Overusing neuroscience
Risk of half-complete knowledge

The third discussion of danger was around the use of neuroscience within therapy, particularly in relation to overusing it with clients as well as a risk of using incomplete neuroscientific information. Jenny and Liam both discussed the danger of counselling psychologists becoming overeager in using neuroscience within their therapy, especially when it is new and novel to them. This overuse may also be subliminally encouraged by the bio-fixated client discussed above. Both Gerber (2011) and Ivey et al. (2012) suggested a balanced approach is wise when integrating neuroscience into psychotherapy. Whilst Fuchs (2004) discussed the role of neuroscience potentially reducing the agency of a client, neither he nor any of the counselling psychology literature seemed to discuss the danger of clients themselves initiating this focus on a biological explanation and as such, the present work highlights an important caution for counselling psychologists integrating neuroscience. The second aspect of this discussion relates to Rachel and Erin’s views on the incompleteness of neuroscience information, however, both came from a slightly different angle. Rachel highlighted that neuroscience is based on looking for cause and effect models between brain and behaviour, and she suggested that there is a lot that neuroscientists do not factually know about the brain; therefore, we must be careful speaking about theory as if it is 100% truth. This aligns with the discussions about the seductive allure of neuroimaging (Ali et al., 2014; Beutel et al., 2003; McCabe & Castel, 2008; Weisberg et al., 2008). These authors, along with Rizq (2007), suggested that neuroscience results are open to their own questions of validity and that care must be made when interpreting and using neuroscience information, reflecting on whether the relevant research has been carried out using sound methodology. Erin focused on the danger of counselling psychologists becoming a “jack of all trades” and that neuroscience becomes more of a pseudoscience, used without any real understanding. Whilst Ivey et al. (2012) do not go as far as to say that neuroscience could be used as a pseudoscience, they do suggest that psychotherapists must maintain caution to avoid being caught up in neuroscience research which overstates findings. The notion of false expertise is discussed within the American literature on neuropsychology. Malec (1992) and Woody (1992) suggest that there is a danger that counselling psychologists think
they know more about neuropsychology than they actually do, and that they must be cautious in getting too far ahead of themselves, in one sense so as to not cause harm to the client and in a second sense, to avoid the potential possibility of litigation, something which is much more likely to occur in the medical side of practice.

4.9.3. Integration: The opposition and the need - finding the balance

This master theme presents participants’ overall views on what the oppositions to neuroscience may be in counselling psychology, the need for the integration to occur, along with the manner in which this can be done:

Lack of integration thus far...fear of losing identity?

This sub-theme largely emulates that of ‘could we lose our CP values?’. The aim of this sub-theme was to highlight an over-riding sense among two-thirds of the participants, that counselling psychology has so far resisted integrating with neuroscience. This seemed like a vital view to hold up to the light. I would also suggest that both Liam and Nancy shared this view, although they did not explicitly feature within this sub-theme. One of the main reasons that seemed to crop up as a reason for resistance thus far is counselling psychology’s fear of losing its identity by embracing neuroscience. Participants suggested that counselling psychology is keenly focused on protecting its identity, perhaps due to its young age as a profession, especially in the UK. These views parallel discussions within literature (e.g., Cross & Watts, 2002; Hemsley, 2013; Pugh & Coyle, 2000). Counselling psychology has built itself so firmly on an anti-medical model stance (Hemsley, 2013) that anything aligning with the medical model, such as neuroscience, may be resisted. This explains why the fear of losing identity and counselling psychology roots emerged within the master theme outlining the dangers of integration. However, participants suggested that this fear is potentially unfounded, hence, the question mark at the end of the sub-theme title; Erin even suggested that counselling psychology may be being reductionist by excluding alternative world views such as neuroscience. This unfounded fear of losing identity is supported by a number of publications in America, which explicitly highlighted that that there should be less focus and fear of losing identity and that counselling psychologists can maintain their core professional position whilst diversifying into other areas, such as
neuropsychology (Agresti, 1992; Corazzini, 1992; Larson & Agresti, 1992; Paulsen, 1992). It is possible that counselling psychology in America has diversified itself into other fields as it is more established than its younger UK sibling. This is perhaps evidenced by the lack of identity discussion in the 2014 American literature. As far as those authors are concerned, integrating neuroscience into counselling psychology is a positive, and discussions of losing identity do not appear to be relevant. Additionally, even in the UK, practitioners such as Rizq (2007) and Fairfax (2007) suggest that UK counselling psychologists need not fear losing their identity through the pursuit of neuroscience, and that integration can lead to benefits for the profession.

**Overall, neuroscience is good for counselling psychology**

The previous sub-theme elicited a key point for the research in that participants felt that counselling psychology has not really integrated neuroscience thus far, potentially due to a fear of losing its identity. This sub-theme highlights another key headline; five out of six participants suggested that overall, integrating neuroscience is good for counselling psychology. The reason why the sixth participant Nancy is not included in this statement was not because she thought the opposite, that neuroscience is overall a bad thing for counselling psychology, but because she was not explicit in stating her view in either direction. My initial title for the theme was ‘counselling psychology needs neuroscience’ however, it felt that this description was too strong of a statement and did not represent the participants as a whole, only Zara and Rachel particularly advocated the need for neuroscience. This proposal of neuroscience being an overall benefit to counselling psychology is supported by pretty much every piece of literature on the paradigm (Agresti, 1992; Corazzini, 1992; Coutinho et al., 2014; Fairfax, 2007; Fine & Sung, 2014; Goncalves & Perrone-McGovern, 2014; Kemp, 1992; Larson, 1992; Larson & Agresti, 1992; Lopez et al., 1998; Malec, 1992; Paulsen, 1992; Rizq, 2007; Ryan et al., 1999; Sampaio & Lifter 2014; Simon-Dack & Marmarosh, 2014; Woody, 1992; Wright & Diaz, 2014).
Too much counselling, not enough psychology

Liam and Zara both suggested that the profession of counselling psychology can sometimes focus too much on counselling and psychotherapy, and not enough on the psychology side of things. There is little discussion of this within any of the related literature and as such, this sub-theme and view point adds something unique to the paradigm. I have an underlying feeling that this statement has the potential to expand to a number of avenues within counselling psychology, not just integrating neuroscience. As a reminder, the British Psychological Society (2005) defines counselling psychology as:

> embedded in the discipline of psychology and concerns itself with applied areas of psychological work, which overlap with the provinces of psychotherapy, clinical psychology, generic counselling and psychiatry. Therefore, counselling psychology is situated at the interface between scientific and clinical enquiry...Within Psychology generally there are many distinct views of human beings and a range of methods by which these views may be researched. These distinctive theoretical stances concerning the nature of a person can inform each other through the insights developed in clinical work. Thus, counselling psychology respects and incorporates insights from studies in the laboratory, from field-work and from the clinical setting (British Psychological Society, 2010b).

This suggests that there is a fine line between the two worlds of counselling and psychology, with participants proposing that counselling psychologists may be falling into the former too often. This sub-theme links with the participants’ suggestions that neuroscience helps provide support for their scientist practitioner side in section 4.9.1, participants identifying as a ‘counselling Psychologist’ in section 4.9.6, as well as the definition of neuroscience as part of psychology in section 4.9.5. It is suggested by participants that by embracing neuroscience, counselling psychologists are embracing their psychologist side, something which they need to do more often.
It is all about integration, that is what we do

We integrate neuroscience, but according to the client

Every participant discussed integration as the mechanism for implementing neuroscience into counselling psychology. Counselling psychologists are trained to work out of multiple therapeutic models and to integrate them (O’Brien, 2010). Cooper and McLeod’s (2011) pluralistic model was developed from a body of research suggesting that there is no one right therapy for everybody, no one size fits all, and the key is tailoring the approach to what works for each unique client. This echoes what participants discussed. Neuroscience does not have to be used for every client, it can be used as a theoretical underpinning for the therapist to hold, it can be communicated through metaphor and experiential examples, and for some clients a full blown neuroscientific explanation may even be useful. The application of humanistic techniques such as metaphor, use of self, and experiential examples is evidence of the unique additions which counselling psychologists can bring to neuroscience. Counselling psychologists are trained to offer these varying levels of intervention across a number of theories and models (O’Brien, 2010). Participants suggested that a balanced approach is required when integrating neuroscience, something which parallels the discussions of Rizq (2007) within the counselling psychology literature, as well as Gerber (2011) and Ivey et al. (2012) within the psychotherapy and psychodynamic literature.

4.9.4. Methods of learning and the need for training

A number of discussions centred on the integration of neuroscience within counselling psychology training:

Neuroscience not taught on doctorates

How I have learnt neuroscience so far

The challenges of learning neuroscience

This group of sub-themes related to learning neuroscience. Every participant who had undertaken doctoral training suggested that there was no neuroscience training on their course. Jenny mentioned that she attended a couple of neuropsychology lectures which were really useful, but not enough. Nancy undertook the independent
route to training and suggested that there was no requirement for her to demonstrate any neuroscience knowledge. She suggested that it may be because it is not on the standard of proficiency requirements (SoPs) for counselling psychologist competencies. Whilst this may have been the case for Nancy at her time of qualification, the recently published SoPs do include a new requirement for counselling psychologists to “understand psychological models related to a range of presentations including...problems with biological or neuropsychological aspects” (Health and Care Professions Council, 2015, p. 15). These views parallel Ryan et al. (1999), who found that counselling psychology students wanted training in neuropsychological theory and assessment, but they struggle to find it in their courses, namely because training directors, though aware of the relevancy of neuropsychology to counselling psychology, held concerns that it conflicted with the profession’s identity (see section 4.9.3 for identity discussion). The present work unveiled a number of ways in which counselling psychologists currently train themselves in neuroscience, including conferences, talks, books, journal articles, thesis research, webinars, undergraduate and master’s degrees, placements, workplace, and colleagues. These sorts of views do not appear to have been unveiled by previous research; therefore they could help contribute to shaping methods of learning neuroscience within counselling psychology. These experiences demonstrate participants’ willingness to learn about neuroscience. Jenny spoke of giving up her weekends to develop her understanding of neuroscience and neuropsychology tests for her training placement. Participants also acknowledged the challenges to learning neuroscience, notably in relation to the inaccessibility of its language. Erin and Jenny spoke of neuroscience as a dry language and the ideal scenario would be textbooks which communicate neuroscience in a counselling psychology friendly way, perhaps using the experiential and metaphor methods discussed in section 4.9.3. A number of authors suggested that counselling psychologists may struggle with the language of neuroscience (Fairfax, 2007; Rizq, 2007; Fine & Sung, 2014), something which is confirmed by the experiences of the participants. However, there are now numerous books which present neuroscience in a therapist friendly way (e.g., Cozolino, 2010; McHenry et al., 2014), therefore, perhaps the key is educating counselling psychologists that such literature is available.
We need neuroscience in doctorate and CPD training

The previous sub-themes relating to training suggest that counselling psychologists have had to teach themselves about neuroscience and that learning it can be difficult, generally due to the inaccessibility of neuroscience language. However, the view for the majority of participants was that counselling psychology needs to integrate neuroscience into doctoral and CPD training. I would also suggest that both Rachel and Erin shared this view, although they did not explicitly feature within this sub-theme. These participant views support a number of publications (Agresti, 1992; Corazzini, 1992; Larson & Agresit, 1992; Malec, 1992; Paulsen, 1992; Ryan et al., 1999) who all suggested that there should be more neuro-related training within the counselling psychology curriculum. Kemp (1992) suggested that it was ethically responsible for counselling psychologists to familiarise themselves with the neuroscience literature and theory of their work area, particularly for learning difficulty populations. Participants were keen to acknowledge that neuroscience should also be implemented into Continued Professional Development (CPD) training, not just at the doctorate level. Zara discussed the danger that a schism in counselling psychology competency would arrive if only newly trained doctoral students received neuroscience training. It is important that neuroscience is integrated into counselling psychology training across the board, available to all practitioners. This point seems to make a lot of sense, though it is one that has not been explicitly raised in other related literature.

Methods of implementing neuroscience into doctorate and CPD training

Not only did participants share their views that there is a need for integrating neuroscience into counselling psychology training, they suggested methods for how this implementation can occur. One suggestion was around utilising resources from other disciplines, given that there may be a lack of neuroscience expertise within counselling psychology. This supports Paulsen’s (1992) notion that a multi-discipline approach is required for neuro-based training. Agresti (1992) suggested that neuro-based placements are important in training and whilst this never emerged as a particular theme, Jenny and Rachel both highlighted the role of their placement workplace in developing their neuroscientific understanding of clients. Given the challenge of neuroscience being dry and inaccessible, it was suggested that
experiential case studies and learning would be useful, something not seemingly discussed in other literature. That said, Kemp (1992) provided a case example of undertaking and utilising neuropsychological testing with a client who had learning difficulties, suggesting that this sort of case study teaching is possible within counselling psychology and neuroscience. Further suggestions included Zara’s proposal for neuroscience training to be mapped with aspects of neuropsychology training, job specifications, as well as Health and Care Professions Council (2015) and British Psychological Society (2015a) competency requirements for counselling psychologists. There is currently movement within the BPS to increase the partnership between the divisions of counselling psychology and neuropsychology, allowing counselling psychologists to undertake training in clinical neuropsychology (British Psychological Society, 2015b). Additionally, the British Psychological Society’s (2015a) recent update to the counselling psychology curriculum recommends the inclusion of neuropsychological assessment training on doctoral programmes. Liam proposed that neuroscience could actually be a tool for integration in itself, whilst Erin highlighted that counselling psychologists should be given at least an introduction to neuroscience, and a key focus for her would be teaching counselling psychologists how to recognise their boundaries of competence, informing practitioners when and where they should seek further information. In some ways this mirrors Paulsen’s (1992) suggestion that counselling psychologists’ training should provide them with a minimum level of proficiency in neuropsychology, as opposed to fully specialised training - it is in post-doctoral training that practitioners can become fully qualified as neuropsychologists, should they wish. This relates back to the importance of finding a balance when using neuroscience as a counselling psychologist. Gonçalves and Perrone-McGovern (2014) suggested that neuroscience can be integrated into a conceptual and methodological framework to understand clients within a transdiagnostic and developmental perspective. They suggested that this could be implemented into counselling psychology training via an integrative body-mind training programme (IBMT). However, given the tendency for American counselling psychologists to undertake PhD qualifications, this model focused a lot more on an avenue of research relating to cognitive appraisal, rather than a method of integrating neuroscience into the clinical and research training of counselling psychologists. There is seemingly no real discussion of training within any of the counselling
psychology and neuroscience literature; the primary discussions relate to the
neuropsychology literature. Therefore, the present research offers a lot of unique
perspectives on the subject of training.

The remaining themes are a little more idiosyncratic to the present research. I will
review their relation to existing literature however their primary discussions will be
in section 5.2 when I attempt to integrate my findings into the research questions.

4.9.5. Defining neuroscience

Each participant provided their view on what they understood neuroscience to be:

*The study of the brain*

*Part of psychology*

*Multi-levelled*

Each of the emerging sub-themes sit comfortably within existing interdisciplinary
definitions of neuroscience, suggesting that counselling psychologists share a
common understanding of what neuroscience is with other disciplines. The brain
was highlighted as an area of focus in neuroscience, something which is
acknowledged across numerous text books (Bear et al., 2007). Participants also
defined neuroscience as part of psychology. Ivey et al. (2012) suggested that
neuroscience is interdisciplinary, and psychology is part of its makeup. The
interesting difference here is that participants viewed neuroscience as part of
psychology as opposed to psychology as part of neuroscience. This will be
discussed further in section 5.2. The multi-levelled view of neuroscience is
something which also correlates with many cross-disciplinary definitions. One look
at a neurobiological textbook will indicate the many levels of neuroscientific study,
from high level theories of memory and cognition, through to brain regions, neurons,
and synapses (e.g., Pinel, 2011).

4.9.6. My practitioner identity

Two distinct discussions emerged relating to how practitioners described their
professional identity:
I am a counselling Psychologist

The capital P on psychologist was used to emphasise that all participants identified themselves as psychologists. This suggests that participants were identifying more with the psychology side of their role. There could be numerous reasons for this, notably the need to work as an evidenced based scientist-practitioner in the job market, but perhaps also because it is a natural fit for counselling psychologists; the focus on psychology is what attracted them to the profession. I elaborate on this point in section 5.3. One thing to note is how this sub-theme relates to that of ‘Too much counselling, not enough psychology” in section 4.9.3. In general, there was no discussion on this topic of a psychologist identity within the existing literature related to the paradigm, particularly in the UK.

A pragmatic approach to work

A pragmatic approach emerged from Liam and Zara’s interviews; there was a sense that they felt that if something was beneficial for a client and counselling psychologist, then it should be utilised. Zara discussed this in relation to items like psychometrics and diagnosis, suggesting that in the right time and place they can be useful. If neuroscience is useful, then it should be used. This view is discussed by Rizq (2007) who proposes a pragmatic approach throughout her paper e.g., “we may have to put such tired old dualisms behind us in order to focus on the arguably more pragmatic task of trying [to] understand how brain and mind might interact to produce subjective experience and psychological distress” (p. 5).

4.9.7. Summary of relationship with existing literature

The previous section was primarily about understanding how my findings relate to existing literature. Given my focus on understanding the unique perspective of counselling psychology, I maintained a focus on literature related to counselling psychology and neuroscience, rather than entering into too much of a discussion on psychotherapy and neuroscience. However, given the shortage of literature on the paradigm, there were times when I linked the present results with psychotherapy based literature, particularly when discussing the dangers and challenges of integrating neuroscience, helping to provide some context and discussion on the
dangers and challenges emerging from my analysis. All of the existing American counselling psychology literature on integrating neuroscience is very pro-paradigm and discusses particular concepts of neuroscience, rather than an overarching view of integrating the two disciplines. As such, although there were aspects of the 2014 American literature which supported the findings of this research, in general, the themes elicited here add a lot of additional aspects to how the paradigm can be implemented, as well as providing a more balanced perspective of both the positives and challenges to integration. The American literature relating to the integration of neuropsychology provided more of a critique on integrating counselling psychology with a neuro-related field, and therefore, was more prominent in my discussions. However, as noted in section 1.2, the present work sees neuroscience and neuropsychology as two differing entities and as such, this research is focused on illuminating factors specific to integrating neuroscience into counselling psychology, whilst acknowledging the links and similarity this has to discussions of integrating neuropsychology into counselling psychology. In terms of the UK literature, the present work supports and adds further depth and discussion to the proposals put forward by Rizq (2007) and Fairfax (2007). It provides a number of potential new findings related to the paradigm, including first hand experiences of how counselling psychologists utilise neuroscience in their work, discussions relating to the need for increased neuroscience training, recommendations on how to implement such training as well as further examples of the benefits, dangers, and challenges of integration. Given the lack of literature relating to the paradigm, it is unsurprising that the present work has unveiled a number of new findings. In terms of the UK literature, the predominant single publication is Rizq (2007). This work was akin to an opinion piece, similar to my own (Goss, 2015b), as well as Fairfax’s (2007) publication on neuropsychology. As such, the present work provides the first empirical study, in both the UK and USA, of counselling psychologists’ views and experiences of integrating neuroscience into their work.

4.10. Chapter summary

In this chapter I have provided a descriptive account of my findings. I have attempted to provide my own perspective in terms of describing the themes which emerged from my analyses; however, I have also provided participant extracts to
ensure that their views and experiences are heard. The six master themes elicited were ‘The dangers of neuroscience’, in which participants highlighted the risks that counselling psychologists should be aware of when integrating neuroscience; ‘Defining neuroscience’, in which participants provided their understanding of what neuroscience is; ‘There are ways that neuroscience can help us’, in which participants highlighted the benefits that integration could bring to counselling psychology; ‘Methods of learning and the need for training’, in which participants discussed the need to integrate neuroscience into counselling psychology training as well as suggesting how this could be done; ‘Integration: The opposition and the need - finding the balance’, in which participants provided an overall view that counselling psychology can benefit from neuroscience but it is important to integrate it in a balanced way; and ‘My practitioner identity’, in which participants discussed their identities as counselling psychologists.

This chapter has also provided a discussion on how my findings converge and diverge with existing literature. Given the lack of available literature specific to the paradigm, findings were related to literature on both the integration of neuroscience and neuropsychology into counselling psychology. Additionally, as there are only two key UK publications relating to the paradigm, findings were related to both UK and American literature. Furthermore, given the lack of anti-paradigm discussions within the counselling psychology literature, particularly in the USA, aspects of psychotherapy literature were included to provide some context on the dangers and challenges proposed by the participants. Overall, it was found that the findings converged and expanded upon discussions across existing literature, and provided a number of new findings related to the paradigm, including first hand experiences of how counselling psychologists utilise neuroscience in their work, discussions relating to the need for increased neuroscience training, recommendations of how to implement such training, as well as further examples of the benefits, dangers, and challenges of integration.
5. Discussion and Conclusion

5.1. Introduction

In this chapter I focus on the interpretations I have taken from the findings. I undertake the discussion at a number of levels, moving from the descriptive towards the more interpretative end of the spectrum, incorporating manifest and latent meanings of the findings (Smith et al., 2009). I first provide an overall discussion of the findings in relation to my research questions, attempting to integrate all of the themes into a coherent thread. Following a discussion of how the findings respond to the research questions, I enter into an interpretive discussion, applying a hermeneutic of suspicion, questioning what some of my findings may indicate, beyond the literal output. I then provide a critique of the research process, discussing strengths and limitations of the work, including discussions on the research methodology, the participant data pool, and acknowledging my fore-structures and potential bias. I then discuss the potential implications for this research, as well as suggestions for future research. I conclude the chapter by presenting a reflexive summary, incorporating key aspects of my reflexive diary as well as general reflections on the research process as a whole.

5.2. Responding to the research questions

So far I have presented the individual themes and sub-themes which I interpreted from my analysis. I rooted the explanation of my themes in the words from participants, as a method of demonstrating openness and congruency to the reader. I then related these findings to existing literature, attempting to understand how my findings support, diverge, or add to what is a relatively small pool of publications. I now enter into a further sense of concluding interpretations, as I attempt to demonstrate how my findings answer my research questions. The initial process of IPA requires the researcher to seek a sense of divergence among topics, creating individual themes. However, many of my themes and sub-themes intertwine, relating to and illuminating one another. In the following section I attempt to communicate how these intertwining layers shed light on the integration of neuroscience into counselling psychology. Though there is some repetition of
discussions from the previous section, the re-emergence of these items is supported with further details and explanation as to how they relate to the research questions.

My primary research question was:

1. How do UK based counselling psychologists view integrating neuroscience into counselling psychology?

Within this primary question were two secondary subsidiary research questions:

2. What are UK based counselling psychologists’ understandings of neuroscience?

3. What do UK based counselling psychologists perceive as the advantages, disadvantages, and challenges of integrating neuroscience into counselling psychology?

In somewhat of a role reversal I will first respond to the secondary research questions, as they provide a framework for then answering the primary research question.

5.2.1. Responding to the secondary research questions

What are UK based counselling psychologists’ understandings of neuroscience?

My primary aim for this research question was to ensure that the definition of neuroscience held by counselling psychologists, particularly those participating in my research, was the same as common definitions of neuroscience across all disciplines. This is why I began interviews with the question ‘Can you describe your understanding of neuroscience?’, helping to ensure that both the participant and I were discussing the same discipline of neuroscience and if it differed, allowing me to gain an understanding of their view and to factor it into my interview and analysis. The findings suggested that participants held a typical understanding of neuroscience, akin with numerous textbook explanations. Participants generally used a memory of their undergraduate or master’s degree in psychology as a basis for how they developed their understanding and definition of neuroscience. The multi-level and brain focused definitions of neuroscience align with typical literature
(Bear et al., 2007; Pinel, 2011). However, as noted in section 4.9.5, two participants viewed neuroscience as part of psychology as opposed to the view of psychology as part of neuroscience held by many (e.g., Ivey et al., 2012). This may have been a case of different wording for the same point, but a key note was that the two participants who defined neuroscience as part of psychology, Zara and Liam, were also the two participants who had strong views on there being too much counselling and not enough psychology in the profession. It may be that combining their passion for the need of both neuroscience and psychology led them to intertwine the disciplines without necessarily thinking about the order of interconnection. I also think that this view of neuroscience as part of psychology supports my rationale for titling the research ‘integrating neuroscience into counselling psychology’ as the perception of integrating the two disciplines of neuroscience and counselling psychology is discussed from a biased angle, i.e., a counselling psychologist point of view (see section 1.2). The research is specifically about integrating neuroscience into counselling psychology and as such, this may explain why participants defined neuroscience as part of psychology, rather than the other way around.

One thing that strikes me when I reflect on my research is that this subsidiary research question was perhaps also a chance to gauge what level of understanding counselling psychologists have in regard to neuroscience. In section 4.9, I discussed a number of processes and dynamics which I interpreted during the interviews and analyses. These processes related to how the participants presented information, including their perceived level of knowledge and confidence in the discussing neuroscience, as well as their sense making process. However, I never really pursued this investigation any further as the research was not geared towards testing participants’ knowledge levels or competence in any way. This lack of knowledge testing was something I mentioned to participants during recruitment therefore it would have been unethical for me to begin attempting to evaluate their understanding within my analysis.

The key thing to note in this research question was that the counselling psychologist participants generally held the same definition for neuroscience as is standard among interdisciplinary textbooks.
What do UK based counselling psychologists perceive as the advantages, disadvantages, and challenges of integrating neuroscience into counselling psychology?

Advantages

Participants highlighted a number of advantages which the paradigm offers. Two key areas of advantage were around the benefit of neuroscience when working with clients and when working alongside colleagues.

In terms of client work, it was proposed that neuroscience can help provide a rationale for interventions. Jenny suggested that it can be used to inform psychoeducation for interventions such as trauma focused therapy, whilst Nancy proposed that it can be used to support tenets of counselling psychology, such as the nature of being present and empathic in the therapeutic relationship (Siegel, 2009, 2011). This matches with Coutinho et al.’s (2014) proposal that developing an understanding of the neural correlates of empathy can help improve counselling psychologists’ training and subsequent client work. In both a clinical and research avenue, counselling psychology can help us understand the individual more. By combining neuroscience and phenomenological research methodologies, we can improve the efficacy of psychotherapy interventions, a view shared by many others (Rizq, 2007; Coutinho et al., 2014; Fine & Sung, 2014; Simon-Dack & Marmarosh, 2014; Wright & Diaz, 2014). Neuroscience can also be used to empower a client. Rachel and Erin discussed their work in child psychology services and suggested that not only do the children find a neuroscience explanation empowering, but that a lot of parents can also find it useful as it helps to explain concepts such as emotional attunement and regulation. They suggested that many parents they meet have already read up on neuroscience literature as it is common in so many books and websites nowadays, therefore by understanding neuroscience, counselling psychologists can relate to clients in another alternative language. Jenny suggested that by not having a basic understanding of neuroscience, she would feel disempowered. Whilst recognising the notion that clients are the experts of themselves, she still feels it helps support her professional position if she can respond to and discuss neuroscience theory with clients, particularly those who have some understanding of it themselves. This notion of neuroscience helping to support
client and caregiver communication parallels existing literature (Larson, 1992; Samapaio & Lifter, 2014). A number of participants also discussed the advantage of neuroscience increasing their holistic view of a person. As suggested by Rizq (2007), the biological component of a person’s make-up cannot be doubted. Participants echoed this, suggesting that it would be wrong to ignore the biology of a client, it is a key part of what makes a person tick and as such, by understanding more of the biology, counselling psychologists can understand more of the person.

The second component of advantage relates to the benefit of neuroscience for counselling psychologists when working alongside medically orientated colleagues. Participants indicated that neuroscience provides an extra language and knowledge base to increase counselling psychologists’ position in MDT environments. Many MDT colleagues have a rooting in the medical world, including psychiatrists, neurologists, clinical psychologists, and nursing staff. It was suggested that if counselling psychologists want to be heard, respected, and acknowledged as part of the team, they need to have at least some understanding or ability to speak and understand the language of neuroscience and medicine. Jenny spoke of her first-hand experience of this, both within clinical and research teams. Zara highlighted that once she established herself with her medical colleagues, consultants were happy for her to take the lead in client interventions, they trusted her. As such, being able to communicate through neuroscience not only allows counselling psychologists to understand the views of MDT colleagues, it also allows them to challenge their views, helping to increase the role of psychology within client care. Many medical contexts highlight the need for evidence based practice and counselling psychology defines a large part of its identity as belonging to a scientist-practitioner model (Lane & Corrie, 2006). Participants suggested that neuroscience develops the scientist-practitioner part of a counselling psychologist identity. By integrating neuroscience into their rationale for interventions, counselling psychologists are more likely to be heard by colleagues. The fact that there is a lot of neuroscience which supports the underlying principles of counselling psychologists’ work - for example Nancy discussed how Dan Siegel (2009, 2011) neuroscientifically promotes mindfulness and being present for a client (see section 2.6 for more examples) - suggests that integrating neuroscience does not necessarily mean that counselling psychologists
have to change their way of working. Neuroscience can support, build, and improve existing models of therapy and principles of counselling psychology.

Disadvantages

I initially thought of combining disadvantages and challenges together. However, it feels there is just enough distinction between the findings related to these two questions to warrant their own discussions. I am reluctant to call the following items ‘disadvantages’. It is possible that this may be my pro-integration bias having an influence; however, as discussed in previous sections, my analysis led me to a master theme called ‘the dangers of neuroscience’. The use of the word ‘danger’ relates to items which participants suggested had a potential to pose a risk to counselling psychology. With the advantages, participants often provided experiential examples of the benefit to integration, they spoke of these items as things which have happened for them and have a potential to happen again. When I asked about disadvantages, the majority of participants spoke of things which other counselling psychologists might say, rather than they themselves. They suggested disadvantages which might happen, but probably not. In the case of an actual experiential example of a disadvantage, such as using neuroscience with a biologically fixated client, Jenny suggested that this has often happened with clients who lean towards a personality disorder diagnosis; therefore it might not be relevant to every other client. Another term which could be used in place of disadvantage is ‘risk’. Participants often described risks which may occur when integrating neuroscience, however, they also often provided ways to mitigate or avoid such risks. In this section I will present the dangers of integration proposed by the participants. In my discussion of the primary research question, I will connect the themes of danger discussed here with the themes of mitigation and opposing arguments proposed in other themes.

It was suggested that neuroscience could pose a risk to the use of psychological therapy within health care and as such, a risk to the occupation of counselling psychology. Neuroscience could contribute to the downfall of therapy by supporting the medical model. Zara suggested that pharmaceutical companies could actually be using neuroscience more to develop their research. If this happened, it could lead to
even more reliance on medication, particularly as it is cheaper than psychotherapy. Nancy suggested that neuroscience is used to provide an evidence base for the latest focus of research and pathology. She cited the recent example of dementia, suggesting that there is so much focus in completing an early diagnosis of dementia, that therapy and the lived experience of a person is forgotten. In both these cases, neuroscience is seen as the fuel for the anti-therapy machine rather than the actual enemy of therapy.

There were a number of themes which all related to the notion of reductionism. The debate between counselling psychology and the medical model is not a new one (Hemsley, 2013) and the notion that neuroscience is a reductionist approach, pathologising people as objects rather than empowering them as individuals is often a key part of that debate (Fuchs, 2004; Rizq, 2007). Participants discussed concerns that neuroscience has the potential to be reductionist and that it could potentially compromise the philosophical underpinnings of counselling psychology, namely, to see a person from a humanistic perspective, working with their lived experience. One of the ways that neuroscience could actively feed into this is when facing biologically fixated clients. Nancy highlighted that as a counselling psychologist, she wants to empower people, she does not believe in therapy being about her having a finite solution for clients. Jenny discussed an experience she had in which she met a client who was often searching for a biological cause to her problems, almost as a crutch or external locus of control. Initially, Jenny engaged in the neuroscience discussions as she felt it would build rapport and whilst it possibly did, she then found it difficult to pull the client back from this biological focus, the client began to question the point of therapy and was resistant to engaging in processing her thoughts and emotions.

Overusing neuroscience was also seen as a danger. Jenny also related this theme to her experience with biologically fixated clients whilst Liam highlighted the danger of trying to push neuroscience explanations onto clients. It was suggested that there is a danger counselling psychologists could become blinkered in their use of neuroscience and use it for everything and everyone, something which will be of detriment to clients.
A final danger to integrating neuroscience lies in a lack of knowledge, in both neuroscience and the counselling psychologist. In the first instance, Rachel highlighted that a lot of neuroscience theory is based on research which is open to critique. There is a sense that Rachel is suggesting counselling psychologists should remain cautious when engaging in neuroscience, recognising that, as indicated by Nancy, it is one of many possible truths. It was proposed that counselling psychologists should take time to familiarise themselves with any neuroscience theory that they use, allowing them to understand the validity and trustworthiness that it holds, especially if they are to then communicate it to clients. This parallels the views of Ivey et al. (2012) as well as the concerns of neuroimaging discussed by Beutel et al. (2003) and Rizq (2007). Erin focused on the danger of counselling psychologists becoming a “jack of all trades” and that neuroscience becomes more of a pseudoscience, read on a superficial level, and used without any real understanding.

Challenges

There are two components to the challenges of integrating neuroscience into counselling psychology; issues around identity and the difficulties of learning neuroscience.

The fear of losing identity has surfaced in both the danger (disadvantage) and challenge section. This perhaps indicates how prevalent it was in the interviews as well as the aforementioned overlap between these two sections. In the previous danger discussion, I focused on participants’ views that neuroscience could compromise the roots and values of counselling psychologists. In this section, I am highlighting an over-riding sense among two-thirds of the participants that counselling psychology has so far resisted integrating with neuroscience, primarily because of counselling psychologists fearing they will lose their identity. However, there was a sense that participants suggested this fear is potentially unfounded. Erin even suggested that counselling psychology may be being reductionist by excluding alternative world views such as neuroscience. This unfounded fear of losing identity parallels discussions in the American neuropsychology literature (Agresti, 1992; Corazinni, 1992; Larson & Agresti, 1992; Paulsen, 1992) as well as the UK views of
Rizq (2007) and Fairfax (2007). The second issue around identity stemmed from Zara and Liam. They were quite strong in their views that counselling psychologists can be guilty of engaging in too much counselling and not enough psychology. This suggests that a challenge to integration is the resistance of those practitioners who see themselves as counsellors, not as psychologists. Zara suggested that existential and spiritually based counselling psychologists may be the most likely to object to neuroscience as they may fear that it will reduce their ability to give value to clients’ spiritual experiences.

The second challenge is around the difficulties of learning neuroscience. The first aspect of this was participants discussing a lack of neuroscience training on their counselling psychology doctorates. Four out of six participants came through the professional doctorate qualification and only Jenny experienced some form of neuropsychology training, something which she said was really useful but perhaps not enough. Rachel mentioned that her course supervisor was anti-neuroscience and that she was encouraged to not pursue neuroscience within her thesis, on account of it being reductionist. This could suggest that if the programme directors and curriculums on professional doctorates are not on board with neuroscience, the benefits that it could bring trainees will not be realised. Nancy undertook the independent route qualification and suggested that neuroscience was not part of her competency requirements; therefore she had no real motivation to explore it. The second challenge of learning neuroscience centred on the inaccessible, dry language of neuroscience. Counselling psychologists are often involved in subjects that speak around peoples’ experience, using case studies and metaphors as opposed to statistics, neuronal connections, and brain regions. Therefore, participants such as Erin and Nancy spoke of how disengaged they feel when reading neuroscience, it can be difficult to comprehend. This resistance to the language of neuroscience was also raised by a number of American and UK publications (Fairfax, 2007; Fine & Sung, 2014; Rizq, 2007).

Zara suggested that learning how to engage in therapeutic models is an underlying part of counselling psychology training, a view which aligns with the British Psychological Society (2005); therefore, integrating neuroscience into counselling psychology training would have to be done in a way which avoids a reduction of the
time spent learning therapy. She also highlighted that there is a danger that a schism in counselling psychology competency would arrive if only newly trained doctoral students received neuroscience training; as such, the challenge is ensuring that neuroscience training is implemented across the board, to both new trainees and qualified professionals.

5.2.2. Responding to the primary research question

*How do UK based counselling psychologists view integrating neuroscience into counselling psychology?*

As can be seen above, participants proposed a number of advantages, risks, and challenges to the integration of neuroscience into counselling psychology. Participant views stemmed from a range of experiences accumulated during their undergraduate and master’s training programmes, different aspects of their doctoral training, work and job contexts, liaison with colleagues at conferences and events, as well as other aspects of their lives. There was an overall view among participants that counselling psychology has not integrated neuroscience so far, however, each participant proposed at least one way in which they are currently integrating neuroscience into their work as a counselling psychologist, perhaps suggesting that although participants may feel somewhat isolated in their use of neuroscience, there are actually more counselling psychologists integrating neuroscience than they each anticipated.

The overall consensus was that counselling psychologists should integrate neuroscience into their work. There were varying views on how much integration should take place, but even Nancy, who was perhaps the least interested of all, suggested that neuroscience can be of some use to counselling psychology. This overall view that integration should take place was communicated in two primary methods. The first method was the literal words of participants, as indicated in sub-themes ‘Overall, neuroscience is good for counselling psychology’ and ‘We need neuroscience in doctorate and CPD training’.
The second method occurred in how participants presented their views. Not only did participants present a range of positives for integration, but, when discussing any disadvantages or challenges to integration, they often presented counter arguments to their more anti-integration views and suggested that overall, the key to integration is about balance, with neuroscience providing a beneficial optional support to counselling psychologists as opposed to a necessary force for each and every client, a view also held by Rizq (2007). To help provide an example of how participants communicated this need for balance, I would like to discuss each of the risks and challenges highlighted in section 4.9.2, along with the counter arguments that participants put forward to these risks.

Although it was suggested that neuroscience could pose a risk to psychological therapy by improving medication, Zara also suggested that improved medication may be a good thing, especially if it helps somebody engage in therapy more. Nancy discussed that neuroscience is often used to support the next medical orientated hot topic of funding, particularly in the National Health Service (NHS). She suggested that these funding topics often pose a risk to therapy and counselling psychology, however, she also acknowledged that some of the neuropsychological measures which have been introduced from funding sources have been useful in helping to find the right care pathway for people. Participants highlighted that counselling psychologists have perhaps resisted neuroscience so far based on a fear of losing their identity, however, it was suggested that this fear is not necessary, a view supported within existing literature (Agresti, 1992; Corazinni, 1992; Fairfax, 2007; Larson & Agresti, 1992; Paulsen, 1992, Rizq, 2007). Participants suggested that, if anything, there needs to be a shift from the counselling to the psychology part of the identity, and neuroscience can help counselling psychologists undertake this shift, helping to balance their reflective-practitioner identity with their evidence based scientist-practitioner identity. A number of examples were provided as to how neuroscience supports many of the theories and therapeutic models which counselling psychologists currently work from, therefore, aligning with neuroscience can help provide rationale and further development to counselling psychology interventions.
Participants acknowledged that neuroscience can be reductionist; however, if used appropriately, they suggested that it can provide an additional component to understanding the holistic world of a person, alongside and complimentary to the subjective experience. It was suggested that it could be reductionist of counselling psychology to isolate itself from other disciplines, including neuroscience.

An overarching concern among participants was that neuroscience could be dangerous if it was overused. There is a danger that counselling psychologists could become blinkered in their use of neuroscience and use it for everything and everyone, something which will be of detriment to clients. However, participants countered this view by suggesting that counselling psychologists are trained to integrate, in both theory and clinical skills. As such, there should be no reason why neuroscience cannot be used in an integrated manner, adjusted for the individual client.

Participants suggested that there is a need to integrate neuroscience into counselling psychology training, ensuring it is at both the doctoral and CPD level, providing an equal opportunity of learning to all counselling psychologists. Whilst there has been some recent movement towards incorporating neuropsychological assessment into doctoral training (British Psychological Society, 2015a), participants experienced a lack of neuroscience within the counselling psychology curriculum, confirming that the majority of their neuroscience knowledge has been self-taught, through mediums such as conferences, talks, books, journal articles, thesis research, webinars, undergraduate and master’s degrees, placements, workplace, and colleagues. A number of proposals were put forward as to how counselling psychology can better integrate neuroscience into its training. Participants suggested that if there is a lack of in-house expertise within the profession, utilising established neuropsychology resources may be of benefit, especially if it allows counselling psychology to match with neuropsychology competencies, a process currently undertaken for other subjects within the curriculum. Given the challenge of neuroscience being dry and inaccessible, experiential case studies and learning were also advised as a teaching method. This is something which could be factored into CPD training, providing neuroscience related information alongside examples of its relevancy for therapeutic work. A number of participants spoke about their experience of using neuroscience
in trauma work, suggesting that some counselling psychologists can and want to learn neuroscience related information. Zara and Nancy both discussed the role of competency requirements as an influence on the counselling psychology curriculum. Zara suggested that it is important that any neuroscience training, doctoral or CPD, is tailored towards meeting the competency requirements of the British Psychological Society (2015a), Health and Care Professions Council (2015), as well as employer job specifications. Given that the recently published standards of proficiency do include a new requirement for counselling psychologists to “understand psychological models related to a range of presentations including...problems with biological or neuropsychological aspects” (Health and Care Professions Council, 2015, p. 15), it is perhaps now more relevant than ever for neuroscience to be included in the counselling psychology curriculum. Erin suggested that counselling psychologists should be cautious when integrating neuroscience into their practice, ensuring that they have a good understanding of the topic before employing it into their client work. She suggested that counselling psychology teaches neuroscience, but it should also teach how to use it safely, providing a basic introduction on how it can be used by counselling psychologists. Although Erin highlighted the need for counselling psychologists to be aware of their knowledge limits when using neuroscience, she also suggested that this is the same as with every other aspect of their work. Some practitioners will be more versed in certain models of therapy and some will specialise in certain client populations, therefore, counselling psychologists’ training and supervision is one that should already provide a framework of support for ensuring they work within their individual competency boundaries.

5.3. Applying a hermeneutic of suspicion

I tried to ensure that my enthusiasm for integrating neuroscience into counselling psychology did not hinder me from taking a balanced analysis. However, I do not want to go so far in trying to remain neutral that I end up hesitating on certain interpretations. As such, I feel it is important to present a number of additional discussion points which emerged from the analysis.
IPA operates a double hermeneutic by combining empathy and questioning in an attempt to understand participants’ worlds. The concept of questioning was developed from Ricoeur’s (1970) theory of suspicion. Whilst the hermeneutic of empathy seeks to reconstruct an original experience in its own terms, a hermeneutic of suspicion uses existing theories and narratives to shed light on a phenomenon (Smith et al., 2009). In the previous section, I focused on utilising the notion of empathy to link participants’ data with the research questions, acknowledging the participants’ words in their own terms. In the following section I focus on the notion of suspicion, utilising my interpretations, theories, and narrative to reflect on observations which emerged during the analysis.

I noticed that participants often discussed challenges or disadvantages of integration as the views of others. Participants would often say “some counselling psychologists may think…” without necessarily placing it as their own view. For example, when Zara discussed that neuroscience may be seen as a threat to identity, she phrased it as:

I: where do you think they'd be coming from with that angle, what do you feel they would perceive we'd be losing an identity? [439]

Z: this is just guess work because it's not me [laughs] [440]

This type of discussion occurred regularly. This may have indicated that there was an anticipated resistance to neuroscience among participants, almost as if everybody expects everybody else to hold a resistance and yet each of my participants suggested that in general, they are pro-integration, granted some more than others. However, it could be argued that participants’ explicit suggestion of ‘others’ having an anti-integration view was because my participant population was generally pro-integration. Nancy was the only participant to place herself in the little or no understanding/interest in neuroscience group and she appeared to be the one who owned anti-integration viewpoints the most. In section 4.9.2, I highlighted that Nancy actually provides a voice for the anti-integration ‘some’ and ‘others’ that the other participants discussed. This suggests that my research would have been strengthened by recruiting more participants who held low interest/anti-integration views. In the research limitations discussion (section 5.4.3), I have suggested that
one possible reason for my difficulty in recruiting for the low interest/understanding group could be because people may be reluctant to come forward as being anti-neuroscience. If this is the case, the question has to be asked why?

One reason may be that people in this group have no interest in discussing the topic. It would be akin to asking somebody who has no interest in sport to talk about their favourite athletes; they would not be overly keen to do so. Many counselling psychologists enter the profession due to their preference and alliance with client-centred humanistic traditions (Norcross, 2000) and may not see neuroscience as part of this. The discussion of biology may counteract the personality traits and preferences which led them to choose counselling psychology as their vocational pursuit. This may explain why there appears to be a lack of discussion about neuroscience within UK counselling psychology literature; perhaps the nature and personality of people entering the counselling psychology profession is generally one less interested in neuroscience and its associated methodologies.

Though there may be a number of other reasons for the apparent lack of neuroscience discussion, participants consistently suggested that counselling psychology is keenly focused on protecting its identity, perhaps due to its young age as a profession, especially in the UK. Perhaps this ‘protection of identity’ could be the primary reason for the lack of neuroscience discussion within counselling psychology and could also explain my difficulty in recruiting participants into the low interest/understanding group. Given that counselling psychology has built itself so firmly on an anti-medical model stance (Hemsley, 2013), anything aligning with the medical model, such as neuroscience, may be resisted. Lane and Corrie (2006) highlighted that the BPS initially rejected counselling psychology’s request for divisional status and allocated it the role of a special group, something which was met with “fierce resistance from within other Divisions and conflict within our own ranks about the underpinning tenets of the area” (p. 12). It took further effort and time before counselling psychology was acknowledged as a unique identity within applied psychology and could be awarded divisional status. It was the focus on recognising humanistic beliefs within a scientist-practitioner model that formed the premise of the counselling psychology identity. Zara discussed her feeling that it is
an older generation of counselling psychologists who may be more resistant to neuroscience:

Z: I think, let me have a think about that one [pause] this might be really unfair [pause] but I think I would expect resistance... from [pause] maybe the older school counselling psychology side of things...a fear, a fear of losing identity [428-434]

The pauses in this interaction may demonstrate that Zara is mindful this could be quite a controversial view and wants to pick her words carefully. But whether or not it is factually true that the older generation of counselling psychologists are more resistant to neuroscience may not matter; what matters is that it would be understandable if they were. Many of the older generation practitioners will have experienced the initial challenge and resistance involved in establishing the division of counselling psychology, which may have led to the professionalisation of counselling psychology. Professionalisation is seen as the process through which an occupation develops its own unique set of characteristics which set it out from other professions (Hemsley, 2013). These processes align with the in-group and out-group processes of Social Identity Theory (Tajfel & Turner, 1979), in that members of a profession focus on enhancing and protecting the reputation of their occupation by attempting to create distance and difference from other professions. It has been suggested that counselling psychologists’ focus on recognising the person in front of them and seeking to explore the subjective experience of clients has historically led them to rejecting the medical model (Hemsley, 2013). To acknowledge the medical model may be seen as contradicting their professional identity. Therefore, it is understandable that practitioners would be resistant to engaging in a dialogue about neuroscience, either due to a fear that it would dilute the distinct characteristics of their profession, potentially endangering the existence of the discipline, or that they have so much belief in a particular set of values that they see no benefit in discussing other alternatives.

Further to the fear that neuroscience may dilute the unique characteristics of their profession, counselling psychologists may also be afraid to embrace neuroscience. Practitioners may have spent so long in developing their expertise within a subjective and humanistic model, they have become concerned that their professional image
may be damaged if they were to try and engage a new dialogue such as neuroscience. This process is perhaps evidenced in Nancy’s interview:

N: but in terms of using proper terminology or having a good language for it and talking professionally with a kind of neuroscientist or you know somebody who is doing like neuro, you know, erm, neuro erm, neuropsychological assessment... or to a neurologist or to a psychiatrist talking in the sort of professional terms I couldn't defend my vocabulary really...you get those sort of reports from neuro, psychology reports, I mean I don't understand anything from them, or most, I mean yeah [202-208]

Notice Nancy’s language here as she talks about wanting to sound “proper” and “professional”. This may indicate a fear that if she tried to talk about neuroscience, she would not be respected as a proper professional. Perhaps this is something that many other counselling psychologists fear and could further explain the seemingly low level engagement of neuroscience within the profession, as well as the difficulty I faced in recruiting low interest/understanding people to my research. It could be that by downplaying the importance or value of neuroscience for effective interventions, and not engaging in conversations on the topic, counselling psychologists are (consciously or unconsciously) attempting to reduce the threat that a lack of understanding around the subject could bring to their profession and identity.

However, this research – through reviewing the literature and participant data – has indicated that neuroscience could benefit counselling psychology, and vice versa. The challenges and dangers of integration have also been highlighted, and yet whenever participants proposed dangers to integration, even if they were their own views as opposed to what others may think, they offered competing arguments as to how such a danger could be avoided or counter argued. This suggested two things to me; the first was that it highlights counselling psychologists’ ability to hold competing perspectives, to see both sides of the coin. The second was that the dangers of integrating neuroscience into counselling psychology can be overcome and the important thing is highlighting them, to ensure that they are acknowledged and taken into account in moving the paradigm forward.
Van Deurzen-Smith (1990) suggested that psychology is both science and art, and counselling psychology is well placed to view the world from different, sometimes competing perspectives. If counselling psychologists are truly able to hold multiple perspectives, then should all theories and models not be up for discussion? Perhaps this is why Woolfe et al. (2010) suggested that counselling psychology is questioning the medical model, as opposed to rejecting it.

It could be suggested that neuroscience is not actually part of the medical model. Neuroscience could be viewed as a theory, one which can be used to support both medical model and anti-medical model stances. As discussed in chapter 2, neuroscience can form part of humanistic and client centred models of therapy. Nancy discussed how the work of a neuroscientist supports counselling psychology’s emphasis on being present for a client:

N: I love the fact that he's, there's this sort of this wishy washy mindfulness and here he is you know talking about it from a very sort of scientific place...doing lots of research and kind of, you know about, about the body about the brain, and you know there's value of being present...and I know being present is the key for therapy... and how that kind of works between people...what happens you know in the brain... what happens in the body...so that, that supports isn't it, what we should be doing, in our work you know... you're kind of working on presence and working on really being in therapy, so important... I think that is so important for counselling psychology, you know the presence...this just supports us as counselling psychology in our work [214-226]

As discussed in sub-theme 3.3, neuroscience can potentially support counselling psychologists when presenting their views in medically focused MDTs. Further to supporting MDT work, neuroscience can also be used to support those working toward social justice issues:

Key social justice issues such as poverty, abuse, bullying, racism, sexism, heterosexism, and discrimination against the persons with disabilities...are all
stressful. Stressful events can curtail normal brain development in newborns and youngsters and negatively affect brain neurogenesis and plasticity in adults and older adults. Thus, these social justice issues are detrimental to the psychological, physical, and social well-being. (Ivey & Zalaquett, 2011, p. 107)

Social justice is a topic which counselling psychology is seen as being firmly involved in (Munley et al., 2004), therefore, it is possible that neuroscience can support counselling psychologists in understanding, raising, and addressing issues relating to individuals and subsequently, to society. This demonstrates that neuroscience can be used in various contexts, including those which focus on subjective, individual, and societal experiences.

To extend the debate as to whether neuroscience is part of, or separate to the medical model, is perhaps beyond the scope of this work. The primary point I wish to make is that whilst there are a number of potential reasons that counselling psychologists may not wish to discuss or entertain the idea of integrating neuroscience into their work, there are a number of potential advantages which integration could bring. But it is important for all voices and opinions to be heard in a democratic manner, “[d]ebate is essential and vital in democracy...[d]ebate does not produce immediate unanimity, but over time it can produce consensus (Trapp, Driscoll, & Zompetti, 2005, p. 5). This is often best achieved by hearing alternative, sometimes opposing opinions and ideas, to develop a holistic and unified movement. Quite what the current consensus on integrating neuroscience into counselling psychology is appears to be unknown, perhaps it never will be. However, this work attempts to take a step towards developing it, by placing the topic further into the light of discussion, ideally to be undertaken from all viewpoints.

5.4. Critique of the study – Strengths and limitations

Having presented a discussion of the analysis material and attempting to answer the research questions, I shall now provide my overall reflections and critique of the research process.
5.4.1. Methodological approach

After conducting an initial scoping review of the literature, I was aware that there was a lack of publications relating to the paradigm. As such, I decided that it was important for this research to go in at the ground level, to really focus on what counselling psychologists’ views and experiences are on the paradigm, helping to develop a platform on which the integration can be taken forward or not, depending on the outcome. I decided upon interpretive phenomenological analysis (IPA) as I felt that this research method would best allow me to enter into the multiple layers of meaning making for participants, as well as congruently acknowledging the role of my own constructs in interpreting qualitative data (Smith et al., 2009). On reflection, I am satisfied with my choice of methodology as I felt it did provide me with the opportunity to explore the views and experiences of participants in a structured yet fluid way, whilst overtly acknowledging the role of my own interpretations within the analysis process. It consistently felt like participants were truly making sense of their views on integrating neuroscience, often for the first time, as discussed by Jenny at the end of her interview:

J: to be honest I'd not really, obviously I like read the information that you sent but then I'd not really thought about it so [laughs]... so I'm not really quite sure kind of what's come out [516-518]

My analysis consistently related to the double hermeneutics of interpretation discussed by Smith et al. (2009), namely, that I attempted to make sense of the participants as the participants attempted to make sense of their world. However, there are some limitations to the work which should be acknowledged.

It is sometimes difficult to determine IPA’s position on structure. Though the non-prescriptive and adaptable nature of IPA is often highlighted (Pringle et al., 2009), it is also described as providing clear and systematic guidelines for researchers to follow (Willig, 2013). This balance of flexibility and structure also manifests in IPA’s approach to reflexivity. Whilst Smith et al. (2009) suggest that researchers adopt a reflexive approach to their work, they do not theorise reflexivity, leaving it open to the researcher’s interpretation (Willig, 2013). This lack of structure around
reflexivity could be seen as a limitation, especially given the active role of the researcher in IPA.

I could have been more explicit in acknowledging the key role of hearing participants’ experiences within my research questions. My primary research question highlighted that I was hoping to obtain participants’ views on integrating neuroscience, but I was equally keen to understand and expand what I learned about their views through hearing their experiences. Question 2a on my interview schedule (see p. 59), ‘Have any particular factors or experiences led you to this view?’, highlights the emphasis I placed on wanting to explore experiences and it was the interpretation of experiences into views which provided an additional factor for my choice of IPA. However, I could have made this clearer and included the emphasis of hearing experiences in the research question. This is why I amended the title of the thesis to include the role of hearing views “and experiences”, so that readers are hopefully aware of this aspect of my research from the outset.

In some ways, I limited the potential of IPA. Smith et al. (2009) suggest that there are three possible levels of interpretation within IPA, moving from a higher level descriptive analysis, through analysis of metaphor, to a micro-textual analysis of aspects such as the temporal status of verb usage. When I previously undertook an IPA project I felt I entered into a very deep analysis, deconstructing meaning to a detailed level, therefore I was aware of what a deeper analysis would look like. In the present research, I operated at a slightly higher level of interpretation, generally working at the first two levels of analysis proposed by Smith et al. (2009). This led to my analysis being undertaken at a more cognitive level, focusing towards the more descriptive end of IPA, but still anchoring my work in the interpretations of participants’ views and experiences. This was a conscious decision. My focus for the research was to stick fairly close to the participants’ words during analysis, providing a level of interpretation that felt meaningful, without bringing too much of my potential bias in. Additionally, I was concerned that getting too caught up in finer interpretations of participants’ narratives would lead the analysis away from the research question(s) and produce findings which were less relevant to the research aim. There were times that I entered into deeper levels of analysis and interpretation; however there were also times when I purposefully decided not to
engage certain items such as the temporal status of a verb. However, it should be acknowledged that this higher cognitive level of analysis could be seen as a limitation. Smith et al. (2009) suggest that the depth of interpretation is a current issue in IPA research. They suggest that there are different levels to interpretation but that many researchers, particularly those new to IPA, produce analyses that are based too much in description. However, Langdridge (2008) suggests that in phenomenological research, there are no hard and fast boundaries between description and interpretation, proposing that “such boundaries would be antithetical to the spirit of the phenomenological tradition that prizes individuality and creativity” (p. 1131), whilst Finlay (2009, p. 11) placed herself in a group of authors who “prefer to see description and interpretation as a continuum where specific work may be more or less interpretive”. I too would place myself in this latter group of authors, acknowledging that IPA can operate at multiple levels of interpretation which can be tailored to the nature of individual research. Furthermore, Smith (2006) argued that focusing on cognition forms a key part of IPA as it is concerned with understanding what a person thinks or believes about a specific topic. As such, I am satisfied with the levels of interpretation I undertook in my analysis, though I acknowledge that an IPA connoisseur may question whether I could have gone that bit deeper. I would suggest that a deeper level of analysis would require an amendment to the research question and reduction of participant numbers. This is a limitation of IPA; in one sense it aims for deep and interpretive analyses, however this plethora of data often has to be stripped down to coherent and more succinct findings, particularly in the context of academic word limits. This means that the researcher will often be faced with a choice of deciding what stays and what goes, adding a further layer of interpretation to the analysis.

5.4.2. Interview schedule

An additional potential limitation within the methodology was my interview schedule. My questions had an element of directness to them and it was noticeable that my themes generally reflected the topic of the questions. For example, I asked participants to define neuroscience and one of the themes that emerged was ‘defining neuroscience’. I also asked participants about the advantages, disadvantages, and challenges of integrating neuroscience and these topics all featured within the master
themes. As discussed in section 3.6.2, I chose to undertake semi-structured interviews, which are seen as the exemplary method for IPA (Smith & Osborne, 2008). My intention was that the mix of structure and flexibility would create a sense of uniformity and consistency in the topics discussed within each interview, whilst also allowing me to enter and probe unique items which came up in each individual interview. Though the master themes do seem strongly aligned with the specific research and interview questions, there is a lot of data within the sub-themes which has come from the open, exploratory space within the interviews. Smith et al. (2009) suggested that an interview should facilitate a discussion on relevant topics which allow a research question to be answered via analysis, something which I feel I achieved. Furthermore, if I had not set out an element of structure in my interview schedule, there is a possibility that either my own internal bias or participants’ views may have led to an interview focusing overtly on one particular view and experience of neuroscience, i.e., for or against. This would have somewhat contradicted my research aim, in that I hoped to hear a range of experiences from each participant. However, although the questions were open, the descriptive analysis and subsequent themes were no doubt influenced by the somewhat direct nature of the questions.

I am satisfied that IPA was an ideal choice for my research. I acknowledge that my research was undertaken at the more descriptive and cognitive end of the IPA spectrum, however, as discussed, this is still within the IPA spectrum. I felt my research benefitted from the emphasis that IPA places on recognising the idiographic and wider applicability of findings. Additionally, IPA explicitly acknowledges the role of interpretation in the research process and acknowledges my role as an insider researcher. Whilst qualitative research focuses less on the utilisation of large sample sizes for generalisable results (Yardley, 2000), it is acknowledged six participants is a limitation when it comes to generalisability. Although my sample size of six aligns with IPA recommendations (Smith et al., 2009), it is possible that another method such as grounded theory or thematic analysis may have focused less on idiographic exploration, allowing for a larger sample size and a potential increase of generalisability, though this would still have not equalled quantitative participant numbers.
5.4.3. Participants

I initially aimed for six to nine participants. Two key factors influenced my decision to stick with the final group of six. The first was that I wanted to ensure I presented the multiple levels of experiences, views, and interpretations that were elicited from each of the participants within the analyses, rather than compressing them within my write-up. My previous experience of conducting IPA and the recommendations of Smith et al. (2009) informed me that even six participants would produce a high volume of data, therefore there would need to be a certain degree of benefit for recruiting more participants beyond six, to counteract the loss of idiographic space in the analysis and write-up.

The second factor related to my goal of recruiting an equal number of participants from three sub-groups of interest/understanding in integrating neuroscience into counselling psychology. The sub-groups were low, medium, and high. I ended up with one participant in the low group, three in the medium group and two in the high group. I found it difficult to recruit a second participant for the low interest/understanding group. Additional to advertising through the national newsletter for the division of counselling psychology and the division’s website message forum, I contacted individuals who I had been informed may belong to the low interest/understanding group. However, each of these individuals confirmed that they belonged to one of the other sub-groups. I reached a point whereby the only additional participants I had available to recruit were those who were medium or high interest/understanding; therefore, I decided to stop recruiting to try and maintain as balanced set of viewpoints as possible. This slight imbalance of viewpoints could be seen as a limitation to the work. My thought is that by having three in the medium group, this somewhat prevents a schism towards the high interest/understanding population. One reason for the difficulty in recruitment to the low interest/understanding group could be because people may be reluctant to come forward as being anti-neuroscience (see section 5.3 for further discussion). The only participant in the low group was somebody I contacted directly, as opposed to a response to the national advert. It is also possible that people may have seen me as a pro-neuroscience researcher and would almost feel subject to a test on their knowledge as a counselling psychologist. As can be seen in my advertisements
(Appendices A, B, and C), I attempted to mitigate these potential resistances, encouraging participants with opposing views to come forward by stating my belief that hearing all views is important, as well as highlighting that the research would not be a test of any kind and that it would be focused on hearing peoples’ views. I also named the sub-groups as both interest and/or understanding, partly as I felt this may reduce the resistance to participation for people who felt they were anti-neuroscience i.e., they could place themselves under the banner of low understanding as opposed to low interest. I also searched literature for an indication of any other people who may have fallen under the low interest/understanding group. Other than spending longer on the recruitment drive, attempting to recruit at the national conference may have helped increase my chance of obtaining an equal set of viewpoints. However, given that IPA tends to focus on recruiting a “reasonably homogenous sample” (Smith et al., 2009, pp. 3), the lack of absolute balance between contrasting viewpoints is not seen as a major methodological limitation as there was less focus on differentiating participants within the analysis. Whilst participants self-selected into different groups, the key focus of this IPA study was about hearing the collective viewpoints of counselling psychologists, rather than attempting to separate and differentiate those viewpoints within the sample population. However, it should be acknowledged that, despite my best efforts, I did not recruit any participants who were strongly against the use of neuroscience, therefore there is a potential that my findings are skewed towards the more positive view on integration, limiting the generalisability and depth of the findings.

An additional limitation to the work relates to the participants’ demography. My data pool consisted of a wide age range, various qualification routes, and experience, however, each participant was white and there was only one male. It is possible that the results could be strengthened by a greater diversity of participant demographics such as sex, race, religion, and culture, though how these demographics would affect the results is difficult to predict. As discussed above, IPA studies do not generally seek to overly accumulate variance within participant samples (Smith et al., 2009); therefore this is not seen as a major methodological limitation.

A number of the participants were familiar to me as colleagues within the counselling psychology profession. It could be argued that this may have limited the
work, in that they may have felt conscious about my views on the paradigm and may have tried to align their answers into something they feel I would want to hear. However, I would argue that participant familiarity was also a strength for the research. By having a prior understanding of a participant’s personality, I had additional information to inform me in developing rapport and congruency within the interview. When interviewing participants who were familiar to me, I aimed to keep the interview and relationship professional, attempting to create a sense of uniformity in the context and process of all participant interviews. Furthermore, familiarity of participants was of a professional nature, as opposed to a social nature.

My initial research aim was to investigate both the clinical and research side of counselling psychology. Although two of my participants worked in academia and discussed their views and experiences of integrating neuroscience into their academic work, there were no specific master themes or sub-themes which discussed the research component of counselling psychology, the main focus was on the clinical applications of neuroscience. This seems a shame as there were some interesting discussions around the use of neuroscience for counselling psychology research, therefore, perhaps recruiting an additional academic oriented participant may have helped some of this data emerge into the master themes. Interestingly, a large portion of the American literature discusses how neuroscience can be integrated with psychotherapy and counselling psychology research, perhaps indicating that there is a schism away from research and towards a clinical focus in UK counselling psychology. However, this is somewhat anecdotal and based on a small population of participants. This point is discussed further in section 5.6.

5.4.4. Fore-structure

Heidegger (1962) held the view that understanding is connected to a given set of fore-structures (or pre-understanding), which are made up by a person’s historicality. As such, a person should become as aware as possible and account for these interpretive influences, particularly in relation to research (Laverty, 2003; Smith et al., 2009). Throughout the research process I attempted to acknowledge my fore-structures, specifically in relation to the research question. My personal view is that counselling psychology can benefit by integrating neuroscience, something I have
discussed elsewhere (Goss, 2015b). I constantly reflected on my actions throughout the research process, attempting to harness my knowledge and passion for the paradigm into a fair and balanced analysis. During the interviews, I felt congruency was the key method for achieving this balance. Having been involved in discussions relating to the paradigm for a number of years, I felt I was able to develop rapport and empathise with clients by having an intrinsic sense of what they were often trying to communicate during the interview. There were also a number of instances whereby I may have sensed some hesitancy or reluctance by participants to provide negative or opposing views on the paradigm, therefore I attempted to bring this into the room to help encourage a balanced perspective, without forcing or questioning their openness. This was evidenced in section 3.9.3.

The fact that I hold a particular viewpoint on the paradigm is undoubtedly a limitation to the work, however, I have attempted so far as possible to prevent this fore-structure from influencing the research process in a detrimental way. One of the reasons I decided to present my findings as separate from the discussion, was that I wanted to give plenty of space to the participants’ words, allowing the reader to review the validity of interpretation and meaning that I have extracted from them. Additionally, I maintained a reflexive diary in an attempt to provide a clear and transparent window to my thoughts, feelings, and decisions throughout the research process. I provide a reflexive summary of my diary in section 5.7.

5.5. Implications for counselling psychology

The overriding finding is that participants are currently integrating neuroscience into their work and may wish to do it more. The results suggest that participants feel more should be done within the discipline to help move this forward. Up to now, there has been a body of literature discussing the integration of neuroscience into psychotherapy. However, there appears to be a lack of discussions pertaining to counselling psychology, especially in the UK. This work suggests that counselling psychologists could potentially harness and add to the field of neuroscience in a unique way. A first step to increasing integration could involve reviewing doctoral and CPD curriculums, to assess whether more neuroscience could be integrated into training. Integrating more neuroscience into training could help counselling
psychology continue to move forward as a scientific and empirical field of psychology, strengthening the scientist-practitioner side of its identity. The scale of integrating neuroscience does not have to be on par with that of medicine or even clinical psychology, but the themes emerging from the analysis support suggestions in the UK Handbook of counselling psychology that “developments in neuroscience offer new insights and an enhanced understanding of brain function that would be folly to disregard” (Strawbridge & Woolfe, 2010, p. 9). Textbooks were excluded from my literature review of counselling psychology publications discussing neuroscience. One reason for that choice was that it is often difficult to distinguish whether a book or author represents the field of counselling psychology, a point proven by the fact that the one chapter focusing on neuroscience in the handbook of counselling psychology is written by a clinical psychologist and psychoanalyst (Heller, 2011). However, the inclusion of this chapter within the section of ‘future opportunities and challenges’ is perhaps a positive indication that counselling psychology is open to neuroscience and the key is taking it forward as a discipline, as indicated in this research.

Suggestions were made for how neuroscience can be integrated into counselling psychology training. This research can in itself provide some guidance to other practitioners on how they can utilise neuroscience within their work, the advantages of doing so, as well as some of the challenges and risks to be mindful of. Participants discussed that training could be presented through typical counselling psychology methods such as experiential learning, and relating neuroscientific data to clinical practice. Additionally, training could also highlight the importance of obtaining neuroscientific data from creditable sources, as well providing guidance on not exceeding knowledge limits. These suggestions could be proposed to the programme directors and training lead for the UK BPS Division of Counselling Psychology.

There is evidence from the participants’ experiences that counselling psychologists are currently utilising neuroscience within their individual work contexts, but that they hold a sense of hesitancy as to whether other colleagues are using it. This research can be used to inform counselling psychologists across the country that some of their colleagues believe neuroscience can provide benefits to counselling
psychology and that some practitioners are already integrating neuroscience into their work. This may propel the integration of the two disciplines further forward by encouraging discussion across the discipline, leading to advancements in both counselling psychology and neuroscience, as each discipline harnesses from the views of each other.

Overall, additional to the implications discussed above, this research provides a unique contribution to counselling psychology as it provides an empirical platform for further discussions on the subject of integrating neuroscience into counselling psychology to be developed. By hearing the views and lived experiences of counselling psychologists, an element of light has been shone on a subject that - given the lack of existing literature - may be somewhat in the dark. Participants and existing literature highlighted the historical debates around the identity of counselling psychology, particularly in relation to discussions around integrating biological and humanistic approaches. In some sense, this research could help counselling psychologists collectively undertake reflective and reflexive processing by increasing the discussion of neuroscience across the discipline, in an attempt to continually increase an understanding of the fore-structure and historicality of counselling psychology's evolving identity.

It should be noted that the findings are limited in their applicability to the entire UK counselling psychology profession. A participant data pool of six is limited in its generalisability. As such, there are different ways that the research can be progressed; I will now discuss these.

5.6. Suggestions for future research

Given the lack of available research on the paradigm, this study has presented findings which suggest that UK based counselling psychologists may have begun integrating with neuroscience and would like to increase the level of integration. There are a number of directions for this research. One direction is to increase the generalisability of the results by taking the thematic findings from this research and issuing them out through quantitative surveys, to each counselling psychologist in the UK. By providing a form of ‘do you agree – yes or no’ to some of the
hypotheses elicited in this work, one would obtain an element of generalisable confirmation or disagreement that the views elicited here represent those of the wider UK counselling psychology profession.

A second direction is to accept the findings elicited here as being generalisable across the UK counselling psychology network and for UK counselling psychologists to begin implementing neuroscience into their research and practice, whether this is acknowledging its theoretical relevance to a particular paradigm or even beginning to integrate neuroscience techniques such as neuroimaging into counselling psychology research, something which can be achieved by forming collaboration with neuroscience researchers. As discussed, psychotherapy and psychoanalysis has begun this process; however, there seems to be a lack of integration between neuroscience and counselling psychology research in both UK and American literature, with the majority of research revolving around theoretical discussion. In the present work, I have advocated that there is a difference between counselling psychologists and psychotherapists. The British Psychological Society (2005) definition supports this view, suggesting that counselling psychologists embody both a reflective and scientist-practitioner model and utilise a large quantity of psychological theory within their work. However, it seems that psychotherapy is the one leading the way in incorporating neuroscience. Perhaps counselling psychology has become too concerned with losing its counselling identity that it has fallen behind counselling and psychotherapy in acknowledging the scientific paradigm of neuroscience. I would suggest that counselling psychology may benefit from defining what constitutes the science in scientist-practitioner.

Given that participants have discussed a number of ways in which they utilise neuroscience within their clinical and research work, further research could also aim to investigate and unpack this further. By explicitly extracting the methods and mechanisms which counselling psychologists currently use to integrate neuroscience, research could provide further education and teaching input into how other counselling psychologists can integrate neuroscience into their work. This research could help address some of the discussions around the benefits and challenges of integrating neuroscience into counselling psychology training.
It is possible that clinically, UK counselling psychologists are well underway in integrating neuroscience into psychotherapy and are combining their unique philosophy and balance of science and reflexivity for the benefit of clients. This was supported by participants’ focus on the clinical applications of neuroscience. This may indicate that there is potentially a lack of research focus within UK based counselling psychology, especially in comparison to America. Somewhat separate from the current research, a future study could investigate what the research identity of counselling psychologists is within the UK, examining the typical author demographic and content of UK based counselling psychology publications. This could also be carried through to a cross-cultural comparison with America, helping to determine what sort of balance exists between clinical and research activity in UK counselling psychology, as well as reflecting on whether this is something which needs to be addressed within the discipline. If counselling psychologists remain highly clinically orientated after qualification, will they not always be subject to the evidence base of others, rather than using their unique perspectives to help improve the understanding and efficacy of mental health interventions, particularly in healthcare systems such as the NHS?

5.7. Reflexive summary

Yardley (2000) and Stiles (1993) highlighted the importance of reflexivity and transparency throughout the research process, as it helps the researcher to acknowledge their fore-structure and internal processes (Heidegger, 1962). Yardley (2000) suggested that a researcher may reflect on the experiences and motivations which led them to undertake a particular investigation, as well as the consideration of how their work was influenced by external pressures or constraints. I maintained a reflexive diary throughout the research process which provided me with a space to reflect and process my research decisions and experiences. Below, I summarise key reflexive issues from the diary which I feel are most relevant to the research.

As discussed throughout this work, I am in favour of integrating neuroscience into counselling psychology. It is something I already do as a trainee, as both a researcher and clinical practitioner, and it is something that I intend to keep doing when (if) I qualify. I chose to study counselling psychology as I felt it promoted the
sense of attempting to understand the person within both the client and the therapist. I have an innate desire to understand our species more. I am a firm believer in the focus that counselling psychology places on hearing the lived subjective experiences of people. It is these experiences and stories which give us incredible insight into the multiple layers of human existence. During my MSc in Psychology I studied a module entitled biopsychology. This view into the underlying structures and connections of our organisms provided me with equal fascination of what it is to be human; however, I maintained a preference for my work and study to be rooted in a humanistic connection with people and as such, continued my pursuit of counselling psychology. During my time on the doctorate in counselling psychology, I have continued to experience both theoretical and ecological examples of why both a subjective and objective understanding of human beings is beneficial to developing our understanding of people. I find the neuroscientific data fascinating; however one thing I notice is that on its own, it lacks meaning, it is only when I intertwine and relate neuroscience to my own personal experience and the experience of others, that a truly illuminated understanding arises. I was recently asked whether I would go into medicine after my degree and I have been compared to a ‘clinical psychologist’ in the past. I think both comments were namely on account of my acknowledgment of biological causation in suffering. But I am a counselling psychologist. There are plenty of medical and clinically orientated psychologists out there who are already acknowledging the role of neuroscience in understanding people. The reason I want to fly the neuroscience flag for counselling psychology is that I really feel it can bring something extra into the mix. Whilst the phrase “acknowledging the subjective, lived experience” can be used quite a lot, this really is a distinguishing feature of humanistic psychology and it is ingrained within a lot of counselling psychologists that I know, perhaps somewhat innately, and perhaps environmentally influenced by our training. Whichever way it arrives, it provides us with a unique way of viewing people. I was recently at the BPS national conference and a neuroscientist presenter highlighted that up to now, neuroscience has focused on collating and presenting the mean data from what is usually hundreds of participants. She demonstrated that in her research, there were some huge variances within the data and it is perhaps within these variances that neuroscience also needs to look as it seeks to progress as a discipline. In my view, this fits exactly with a counselling psychology philosophy and is something that, if integrated further, counselling
psychology could have recommended many years ago. There seems to be a lack of neuroscience discussion across the discipline of counselling psychology as a whole, whether this is at conferences, within research articles, or within training. There are numerous reasons why I think counselling psychology can add to and take something unique from neuroscience research, the question for me was whether this was just my own world view or whether it is shared by colleagues. This is what led me to undertake the present research.

There were a number of methodological reflections throughout the research. From the moment recruitment began, I wanted to allow participants’ voices to be heard, whatever they said. The wish to hear all aspects of views and experiences on integration was represented in my research questions, where I tried to ensure that all angles of views were covered. I also tried to develop this variance by creating the three sub-groups of interest/understanding. I was a little disappointed to not get a uniform distribution among my data pool, but perhaps this is just my quantitative side speaking. I worked to ensure I remained impartial throughout my analysis. It was only towards the end of my research when I had completed the analysis and was heading towards concluding remarks that I began to integrate some of my own views on the paradigm back into the study.

Another methodological reflection related to moments when I realised during the interviews that participants were aware of my pro-integration view. This may have been because of the very nature I was carrying out the research, they may have read my paper on the subject, or, given that a number of participants were familiar colleagues, we may have had previous discussions on the subject. I felt the key to approaching this was congruency, influenced no doubt by my therapeutic training (Rogers, 1957/1992; Yalom, 2002). By bringing this unspoken process into the room, I believe I was able to ease participants by acknowledging that I hoped to hear negative viewpoints as well as positive, which led them to feeling comfortable in being congruent themselves. This sort of process is discussed in section 3.9.3.

A further notable diary entry related to my analysis process. I had decided to undertake each phase of the analysis in a single chunk, i.e., all the interviews, all the transcribing, each analysis, final analysis, and then writing-up. I felt by doing this, I
would reduce the impact of one participant on another. For example, if I had interviewed, transcribed, and analysed one participant before interviewing another, I may have been too immersed in the data and my interviews may have been influenced by an unconscious wish to test out key themes from a previous analysis. Whilst this process of testing out analyses is recommended in grounded theory, I wanted to stick with the idiographic experience of each participant before searching for links in the data. Despite my attempts, I still noticed that some interviews were no doubt influenced from previous participant discussions. All I could do was become aware of this process and to reduce its influence on the analysis, aiming to treat each participant individually. I do not believe that this process had a detrimental effect on the results.

Overall, the findings confirmed a lot of views that I expressed in my paper, Goss (2015b). The difference being that they are now empirically validated as opposed to stemming from anecdotal forms of evidence. I began to realise this during the interviews as at one point, I had to explain to a participant why I was smiling at something she said:

J: [laughs] you're looking at me funny [446]
I: [laughs] I'll tell you why I'm smiling, because I pub, I published a paper on this subject and in that subject I said that that's one of the things that we can look at...[447]
J: oh okay [laughs] [450]
I: so I was being careful [laughs] not to bring my own kind of er, enthusiasm and kind of see where you went at with it [451]

It felt like congruency was important here otherwise the participant may have felt uncomfortable. The key is that I became aware of this process early on in the research and as such, I was able to continually reflect during my analysis to ensure that the data was speaking for itself, rather than me trying to squeeze it into my previous views. This was another factor which influenced my decision to present a findings section focused solely on offering the reader the opportunity to review how I derived my themes from the participant data. Overall, I was pleased with how I
maintained a sense of neutrality in my analysis, whilst harnessing my interest in the paradigm to improve interview rapport and subsequent discussions.

One thing that did surprise me was the empathy I developed for the whole discussion on a fear of losing identity as a counselling psychologist. As I move towards the end of my training and begin the process of looking for jobs, I can understand why it is so important for counselling psychologists to maintain their unique identity, as it would be so easy for it to become lost amid the ever integrating disciplines of clinical and counselling psychology. When we pursue a career, we develop an in-group mentality and often want to protect that profession which we have worked and trained for. I believe the same occurs for all professions, including psychiatrists, which is why they may find it difficult to shift from the medical model. However, in the same way that as counselling psychologists we may promote and celebrate the psychiatrist who is open to acknowledging the role of subjectivity and individuality in a person, so too should we not acknowledge and embrace the role of biology in the make-up of a person?
References


Lapan, S. D., Quartaroli, M. T., & Riemer, F. J. (Eds.). (2012). *Qualitative research: An introduction to methods and designs*. Retrieved from https://www.dawsonera.com


Appendix A – Participant advertisement sheet

Trainee Counselling Psychologist seeking UK based counselling psychologists to take part in a counselling psychology research thesis titled:

**Integrating Neuroscience into Counselling Psychology: Exploring the Views of UK Based Counselling Psychologists**

- Are you UK based BPS and HCPC registered counselling psychologist, qualified for a minimum of 1 year?

If yes, then I would like to invite you to take part in my Doctorate Thesis Research.

Please read the attached Participant Information Sheet and if you would like to take part, please select which of the groups below best describe you and provide a contact email address.

Please tick the box below which best describes your position of interest on the integration of neuroscience into counselling psychology – n.b. the interview will not be a test of your neuroscience knowledge.

- **Little and/or none** – You have little or no understanding on the integration of neuroscience into counselling psychology – and/or - you have little or no interest in integrating neuroscience into counselling psychology

- **General and/or moderate** - You have an element of understanding on the integration of neuroscience into counselling psychology – and/or - you have a general/moderate interest in integrating neuroscience into counselling psychology

- **High and/or keen** – You have a general to good understanding on the integration of neuroscience into counselling psychology - and/or - you have a high/keen interest in integrating neuroscience into counselling psychology.

If you would like to take part in the study, please provide a contact email address below. By providing an email address, you are consenting to the researcher (David Goss) contacting you in relation to the research.

Participant contact email address:

..........................................................

Please hand completed forms back directly to me (David Goss) or email them to david.goss@postgrad.manchester.ac.uk
Appendix B – Participant advertisement for national e-letter and website forum

Integrating Neuroscience into Counselling Psychology: Exploring the Views of UK Based Counselling Psychologists

By: David Goss
Training at: University of Manchester

The aim of this research is to explore UK based counselling psychologists understanding and views on incorporating neuroscience into counselling psychology. I am currently recruiting for participants who would place themselves in the following position of interest on the integration of neuroscience into counselling psychology

“Little and/or none – You have little or no understanding on the integration of neuroscience into counselling psychology – and/or - you have little or no interest in integrating neuroscience into counselling psychology”

Participants are required to be a BPS and HCPC accredited UK based counselling psychologist who has been qualified for at least 1 year.

Participation will involve a 45-60 minute semi-structured audio recorded interview, in which I will ask about your views on the topic. Please note – the interview will not be a test of your knowledge on the subject of neuroscience. Interviews can be carried out at a location convenient for you, including skype.

For more information on this study, please contact David Goss (david.goss@postgrad.manchester.ac.uk). The study is supervised by Dr Terry Hanley (Terry.Hanley@manchester.ac.uk).
Hi **

I was wondering if you would be interested in participating in my thesis research? I'm looking into counselling psychologists' views on integrating neuroscience into counselling psychology.

I have attached an advert and information sheet. If you are interested, could you select which category of enthusiasm you fall under on the advert sheet please? I'm basically looking for people in all three categories of enthusiasm about integrating neuroscience into counselling psychology, so feel free to choose whichever suits you best.

Just to confirm, if you took part, it would be about a 1 hour interview in which I would ask about your views on the subject. At no point would it be a test of your knowledge on the subject.

I would be happy to come to you for the interview.

Please feel free to ask me any questions.

Thanks

David
Appendix D – Participant information sheet

Integrating Neuroscience into Counselling Psychology: Exploring the Views of UK Based Counselling Psychologists

Participant Information Sheet

You are being invited to take part in a research study as part of my Counselling Psychology Doctoral thesis. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

Who will conduct the research?

David Goss, school of environment, education and development (SEED), University of Manchester.

Title of the Research

Integrating Neuroscience into Counselling Psychology: Exploring the Views of UK Based Counselling Psychologists

What is the aim of the research?

The aim of this research is to explore UK based counselling psychologists understanding and views on incorporating neuroscience into counselling psychology.

Why have I been chosen?

You have been chosen because you are a BPS and HCPC accredited UK based counselling psychologist who has been qualified for at least 1 year.

What would I be asked to do if I took part?

You will be invited to take part in an interview. The interview will be conducted one on one between you and I, at the Ellen Wilkinson Building, University of Manchester (subject to this suiting your availability). The interview will be based around a series of questions which I will ask you, relating to your thoughts and feelings on the advantages and challenges of integrating neuroscience into counselling psychology research and practice.

What happens to the data collected?

The interviews will be audio recorded. This data will be stored on a password protected computer and I (the researcher) will then transcribe the audio into a Microsoft program. Interview transcripts will be encrypted. I will carry out an
analysis on the transcripts. The audio will be destroyed at the end of the research project, whilst the transcripts will be maintained by the University of Manchester for timescales aligned with the Data Protection Act.

**How is confidentiality maintained?**

All data is password protected and the interview transcripts will be encrypted. A pseudonym will be used to protect your identity within the research.

**What happens if I do not want to take part or if I change my mind?**

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep, asked to complete a group interest form (appended) and asked to sign a consent form. If you decide to take part you are still free to withdraw at any time without giving a reason. It should be noted that once the research is published, withdrawal of anonymous data will not be possible.

**Will I be paid for participating in the research?**

No.

**What is the duration of the research?**

You will be required to attend one interview which should last approximately 45 minutes – 1 hour.

**Where will the research be conducted?**

Interviews will be carried out at the Ellen Wilkinson Building, University of Manchester. Confirmation of room location will be given closer to the time. Where this location is inappropriate to your schedule, we will discuss alternative locations/methods (Skype/telephone etc.)

**Will the outcomes of the research be published?**

I am aiming to publish the outcomes of the research. It should be noted that once published, data will be out in public domain; therefore withdrawal of data will not be possible.

**Contact for further information**

Researcher: David Goss: david.goss@postgrad.manchester.ac.uk

Research Supervisor: Dr Terry Hanley

**What if something goes wrong?**

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: Research-Governance@manchester.ac.uk, or by telephoning 0161 275 7583 or 275 8093
Appendix E – Participant consent form

Integrating Neuroscience into Counselling Psychology: Exploring the Views of UK Based Counselling Psychologists

CONSENT FORM

If you are happy to participate please complete and sign the consent form below.

1. I confirm that I have read the attached information sheet on the above study and I have had the opportunity to consider the information, ask questions and had these answered satisfactorily.

2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason.

3. I understand that the interviews will be audio recorded and transcribed, with a pseudonym used to protect my identity. At the completion of the project the audio will be destroyed whilst the research and transcripts will be maintained by the University of Manchester for timescales aligned with the Data Protection Act.

4. I agree to the use of anonymous quotes

5. I agree that any data collected may be published in anonymous form in books or academic journals.

I agree to take part in the above project

Name of participant ___________________ Date ___________ Signature – electronic [ ]

_________________________ _____________________ _____________________
Name of person taking consent Date Signature – electronic [ ]
Appendix F – Ethical approval confirmation

Dear David

Ref: PGR-9166474

Project Title: Integrating Neuroscience into Counselling Psychology: Exploring the Views of UK Based Counselling Psychologists

I am pleased to confirm that your ethics application has now been approved by the School Research Integrity Committee (RIC) against a pre-approved UREC template.

If anything untoward happens during your research then please ensure you make your supervisor aware who can then raise it with the RIC on your behalf

This approval is confirmation only for the Ethical Approval application.

Regards

Georgia Irving
Appendix G – Working with a transcript

An illustration of the analysis stages: Zara

Stage 2 – Initial coding

<table>
<thead>
<tr>
<th>Line</th>
<th>I:</th>
<th>Z:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>413</td>
<td>and the the neuro is something that needs to be added and bolted onto it</td>
<td></td>
<td>neuroscience informs therapy, so neuroscience informs CP skill base of therapies</td>
</tr>
<tr>
<td>414</td>
<td>it informs the therapy, in order to inform the therapy</td>
<td></td>
<td>sounds like Z is trying to understand the balance, therapy is the core, however, psychology is the core, so it’s really about bringing counselling and psychology together, and those not being two different choices almost for a CP</td>
</tr>
<tr>
<td>415</td>
<td>yeah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>416</td>
<td>yeah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>417</td>
<td>yeah, okay, and so there is the danger that if we went down too much of the neuroscience route then we might lose focus on the therapeutic side a little bit</td>
<td></td>
<td>so we have to trust in our identity, trust that we are established as therapy experts, and not worry about losing identity by embracing neuroscience more</td>
</tr>
<tr>
<td>418</td>
<td>maybe, but I can’t see it, I think, I think counselling psychology has got too strong an identity as we’re the people who are experts in the therapies, for that to happen if I’m honest</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Stage 3 – Developing emergent themes

| 413 | I: and the the neuro is something that needs to be added and bolted onto it |
| 414 | Z: it informs the therapy, in order to inform the therapy |

- neuroscience informs therapy
- neuroscience builds on therapy skill base of CP
- counselling and psychology need to be united more in CP

| 415 | I: yeah |
| 416 | Z: yeah |

| 417 | I: yeah, okay, and so there is the danger that if we went down too much of the neuroscience route then we might lose focus on the therapeutic side a little bit |
| 418 | Z: maybe, but I can’t see it, I think, I think counselling psychology has got too strong an identity as we’re the people who are experts in the therapies, for that to happen if I’m honest |

- CP has to trust its identity
- CP’s as therapy experts
- CP has to not fear losing identity

- neuroscience informs therapy, so neuroscience informs CP skill base of therapies
- sounds like Z is trying to understand the balance, therapy is the core, however, psychology is the core, so it’s really about bringing counselling and psychology together, and those not being two different choices almost for a CP

- so we have to trust in our identity, trust that we are established as therapy experts, and not worry about losing identity by embracing neuroscience more
Stage 3 continued – Developing emergent themes

<table>
<thead>
<tr>
<th>Emergent Themes</th>
<th>Transcript Line No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>learning neuroscience through undergraduate degree</td>
<td>8</td>
</tr>
<tr>
<td>impact of medical work environment on using neuroscience</td>
<td>12</td>
</tr>
<tr>
<td>balancing psychology and neuroscience</td>
<td>14</td>
</tr>
<tr>
<td>working from a biopsychosocial model</td>
<td>18</td>
</tr>
<tr>
<td>needing to understand biology</td>
<td>20</td>
</tr>
<tr>
<td>needing to understand biology to solve complex client issues</td>
<td>22</td>
</tr>
<tr>
<td>sometimes can't see what's happening for a person</td>
<td>26</td>
</tr>
<tr>
<td>neuroscience develops understanding biology of a person</td>
<td>28</td>
</tr>
<tr>
<td>neuroscience and psychology as the same and separate</td>
<td>32</td>
</tr>
<tr>
<td>neuroscience provides bio of biopsychosocial</td>
<td>36</td>
</tr>
<tr>
<td>psychology as the science of behaviour</td>
<td>38</td>
</tr>
<tr>
<td>neuroscience develops our psychology understanding</td>
<td>40</td>
</tr>
<tr>
<td>openness within interview</td>
<td>46</td>
</tr>
<tr>
<td>aware of controversy of view</td>
<td>46</td>
</tr>
<tr>
<td>too much counselling not enough psychology in CP</td>
<td>46</td>
</tr>
<tr>
<td>CP wants to be on par with clinical</td>
<td>50</td>
</tr>
<tr>
<td>CP need to think beyond therapy</td>
<td>50</td>
</tr>
<tr>
<td>neuroscience needed to be a psychologist</td>
<td>52</td>
</tr>
<tr>
<td>thinking about whole to be a psychologist</td>
<td>52</td>
</tr>
<tr>
<td>neuroscience as a language for diagnosis</td>
<td>52</td>
</tr>
<tr>
<td>neuroscience develops psychometric use needed as psychologist</td>
<td>54</td>
</tr>
</tbody>
</table>
Stage 4/5 - Searching for emergent theme connections and developing superordinate themes

<table>
<thead>
<tr>
<th>Too Much Counselling, Not Enough Psychology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Too much counselling not enough psychology in CP</strong></td>
</tr>
<tr>
<td>counsellors and psychologists within CP</td>
</tr>
<tr>
<td>we need to balance counselling and psychology</td>
</tr>
<tr>
<td>without neuroscience and psychology, we are well-paid counsellors</td>
</tr>
<tr>
<td>counselling and psychology need to be united more in CP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>We are first and foremost psychologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>counselling is our type of psychology</td>
</tr>
<tr>
<td>not enough psychology in DCoP events</td>
</tr>
<tr>
<td>DCoP events too fluffy</td>
</tr>
<tr>
<td>extra knowledge needed for complex clients</td>
</tr>
<tr>
<td>psychology led CP's identify with BPS events more than DCoP</td>
</tr>
<tr>
<td>some CP's prepared to be well-paid counsellors</td>
</tr>
<tr>
<td>need to be a psychologist in complex care</td>
</tr>
<tr>
<td>need to bring the science into CP</td>
</tr>
<tr>
<td>CP needs to acknowledge science to help client and be taken seriously</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychology is a science</th>
</tr>
</thead>
<tbody>
<tr>
<td>balancing psychology and neuroscience</td>
</tr>
<tr>
<td>neuroscience and psychology as the same and separate</td>
</tr>
<tr>
<td>CP need to think beyond therapy</td>
</tr>
<tr>
<td>we are psychologists, neuroscience is part of psychology</td>
</tr>
<tr>
<td>CP has to embrace science and medical terms as mainstream psychology</td>
</tr>
<tr>
<td>needing to understand biology to solve complex client issues</td>
</tr>
<tr>
<td>psychology is the science which informs therapy (counselling)</td>
</tr>
<tr>
<td>more than just CBT to therapy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need to bring science into our practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>need to be scientist practitioners as psychologists</td>
</tr>
<tr>
<td>want to be taken serious as a practitioner in an MDT</td>
</tr>
<tr>
<td>using neuroscience to create psychologically led treatment plans</td>
</tr>
</tbody>
</table>
Stage 7 - Look for patterns across all participants

<table>
<thead>
<tr>
<th>What Counselling Psychologist Can Use</th>
<th>Neuroscience as a research tool</th>
<th>Neuroscientifically informed counselling</th>
<th>Neuroscientifically informed practice</th>
<th>Neuroscientifically informed education</th>
<th>Neuroscientifically informed research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroscience - a research tool</td>
<td>Neuroscience is a science that</td>
<td>Neuroscience can help us understand</td>
<td>Neuroscience can help us predict</td>
<td>Neuroscience can help us understand</td>
<td>Neuroscience can help us predict</td>
</tr>
<tr>
<td></td>
<td>enables us to understand</td>
<td>neuroscientifically informed</td>
<td>neuroscientifically informed</td>
<td>neuroscientifically informed</td>
<td>neuroscientifically informed</td>
</tr>
<tr>
<td></td>
<td>participants' mental processes</td>
<td>ways of behaving</td>
<td>ways of thinking</td>
<td>ways of behaving</td>
<td>ways of thinking</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stage 7:** Look for patterns across all participants.
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Theme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Stage 8 - Create master themes and sub-themes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Superordinate Theme</td>
<td>R</td>
<td>Z</td>
<td>J</td>
<td>E</td>
<td>L</td>
<td>N</td>
</tr>
<tr>
<td>3</td>
<td>There are ways that neuroscience helps us</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Neuroscience provides rationale for therapeutic intervention</td>
<td>Developing intervention</td>
<td>Neuroscience can inform interventions</td>
<td>Neuroscience helping to provide rationale</td>
<td>Neuroscience supports counseling psychology practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Empowering clients and developing rapport</td>
<td>Neuroscience as a tool for empowering clients</td>
<td>Neuroscience as a rapport builder</td>
<td>Using neuroscience with neuro-fused clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Helping us understand the individual more</td>
<td>Neuroscience as a sense-making tool</td>
<td>Neuroscience enhances our holistic understanding of person</td>
<td>Neuroscience helps to develop understanding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Developing as a scientist-practitioner psychologists</td>
<td>Neuroscience needed to be a psychologist</td>
<td>Developing our scientific practitioner side</td>
<td>Everything stems from the body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>A language to unite and support us in MDTs</td>
<td>Speaking neuroscience allows us to be heard as counseling psychologists</td>
<td>We can communicate with MDT through neuroscience</td>
<td>Science as a bridge to colleagues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td>Supporting our work in MDT's</td>
<td>Neuroscience as a bridge to research</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>