The Attitudes of Counselling Psychologist Trainees (CPTs) on Integrating Neuroscience into Counselling Psychology (CoP).

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Abstract

In recent decades, neuroscience has made significant progress in understanding psychological concepts like attachment and trauma and helped facilitate the work of psychologists in the therapy room. By utilising neuroscience knowledge, advanced techniques and therapeutic tools like neuroimaging and non-invasive brain stimulation, valuable insights have been gained in psychology. In addition, neuroscience has also contributed to our knowledge of biological concepts like epigenetics and neuroplasticity and their reciprocal impact on subjective experience. Given the pluralistic nature of counselling psychology (CoP) and its goal of facilitating unique growth and subjective change in individuals, integrating neuroscience into CoP would be a compelling avenue to explore. So far, no research has explored this integration from the perspective of trainee counselling psychologists.

Accordingly, this project aimed to identify Counselling Psychologists Trainees' (CPTs) attitudes on integrating neuroscience into CoP. Using a pragmatic philosophical stance and within a critical realist research paradigm, data collection gathered information from 16 participants using three focus groups of one hour and a half. Data were then analysed using reflexive thematic analysis.

Three overarching themes and nine themes were identified. The first overarching theme, 'Attitudes on neuroscience' included three themes, namely: 'Do we "really […] really" know what neuroscience is? Between uncertainty and a lack of knowledge', 'Neuroscience: a persona non grata' and 'Neuroscience has a lot to offer'. The second overarching theme, 'Integration between the good, the bad, the ugly and the existing', encompassed four themes: 'A positive attitude towards integration', 'A rejecting attitude

towards integrating neuroscience into CoP', 'Neuroscience is already here: Let's name the elephant in the room!' and 'What is needed before the integration?'. The third overarching theme, 'On being a CPT and identifying with CoP ethos and values', consisted of two themes: 'CoP's defensiveness might drift us away from what it stands for' and 'Who are we? An identity crisis'.

The study has shown that the attitudes of counselling psychology trainees towards integrating neuroscience into CoP were similar to those found in previous research. These attitudes included concern, enthusiasm, openness, and fear. The research also added to the literature on the novel topic of integration and suggested further research to explore and perhaps implement the integration. The study might help change policies within universities by integrating neuroscience into the CoP curriculum to encourage trainees to enhance their neuroscience knowledge and have access to a broader choice of neuroscience-related careers.

Key Words: *trainees, counselling psychology, neuroscience, integration, reflexive thematic analysis*

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List of Abbreviations

BPS – British Psychology Society
CoP – Counselling Psychology
CPT – Counselling Psychologist Trainee
CLPT – Clinical Psychologist Trainee
CP – Counselling Psychologist
ECT – Electroconvulsive Therapy
EEG – Electroencephalography
ERP – Event-related potentials
FG – Focus Group
IPA – Interpretative Phenomenological Analysis
MDT– Multi-Disciplinary Team
NIBS – Non-Invasive Brain Stimulation
RTA – Reflexive Thematic Analysis
TA – Thematic Analysis
tACS – transcranial Alternating Current Stimulation
tDCS – transcranial Direct Current Stimulation

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CHAPTER 1: LITERATURE REVIEW

1.2. Overview

This chapter aims to introduce the thesis, including the researcher's motivation to conduct this study. This section also provides a literature review of the research related to the topic of integration before discussing the research gap, outlining the rationale for the study and ending with a research question.

1.3. Voices and Pronouns.

The researcher will use the third and first person to write this thesis. While the third person will be used to report the actions, describe the content and discuss the results, the first-person pronoun will describe the reflexive process throughout the paper.

1.4. Introduction

My choice for CoP as a field after my career as a software engineer and business analyst was based on CoP's openness and inclusivity. Social justice and pluralism were two aspects that seduced me and drew me to CoP instead of other similar professions, such as clinical psychology or psychotherapy. However, embarking on this trainee journey promoted an inquisitive stance on the meaning of being a trainee and perhaps a future counselling psychologist in relation to other disciplines, such as neuroscience, which drew me to pose several questions, including: can we (Counselling psychologists and trainees) consider social justice and pluralism if we might be Othering disciplines that may help us assist our clients in achieving their aims? Is it justifiable to abandon the insights that neuroscience can provide to

CoP in relation to the biological basis of clients' subjective and unique experiences, as well as the effects of such experiences on their mental and physical well-being, in the pursuit of decolonising psychology and rejecting the medical model? Would CoP integrate some aspects of neuroscience if it is *proved* to align with CoP's values and ethos? The start of my trainee journey coincided with the end of my undergraduate research project, which was an interventional study using Non-Invasive Brain Stimulation (NIBS) to understand whether this intervention can help alleviate the biological correlates of depression and anxiety for the benefit of better responsiveness to talking therapy. However, I became aware that integrating NIBS into CoP might be too early a question to ask in the absence of enough research on the exploration of integrating neuroscience into CoP. Accordingly, this project aimed to identify CPTs' attitudes on integrating neuroscience into CoP. Therefore, data collection gathered information from participants using three focus groups (FG). Data were then analysed using reflexive thematic analysis (RTA). The rationale for each choice of method will be given in the corresponding sections.

1.5. Counselling Psychology

CoP is a field that is distinct from its siblings, such as counselling and clinical psychology. It is considered a field of applied psychology that encompasses the humanistic values of counselling and is based on evidence from psychology. Hence, the practice is informed by two major models: the reflective-practitioner (Schön, 1987) and the scientist-practitioner (Corrie & Callahan, 2000). It is then vital to understand its underpinning philosophy.

CoP is founded on a pluralistic epistemology (Koumi-Elia, 2016). While pre-modernism was characterised by 'metanarratives' lacking rationality, such as religion,

modernism has pictured the scientific paradigm as the new religious manual (Grenz, 1996). It rejected with rigidity what was labelled irrational, such as spirituality and other unquantifiable constructs, for the benefit of reason and a unified truth. However, postmodernism was able to bring a critical stance on both philosophies (Grenz, 1996). It comes in response to the complexity of the world and human beings, as part of it, and how it might be naïve to adopt a single approach to multifactorial challenges such as psychological distress (Grenz, 1996). In view of postmodernism, pluralism is based on rejecting a dogmatic application of any epistemology in explaining the world and people, suggesting the viability of the idea that multiple accounts are required to understand phenomena (McAteer, 2010). Pluralistic epistemology is at the core of CoP in terms of therapy and research (Division of counselling psychology, 2006). According to Cooper and McLeod (2007), this philosophy includes an ethical and political commitment to respect and include other disciplines. In this light, perhaps neuroscience can be integrated into CoP (Goss & Parnell, 2017).

CoP might absorb pertinent aspects of neuroscience through a biopsychosocial application. In the past decades, neuroscience has enhanced our understanding of neural constructs that affect our behaviour and daily experiences (Panksepp & Biven, 2012). Moreover, it shares the non-deterministic stance of CoP through complex, dynamic and responsive phenomena and sub-disciplines such as neuroplasticity and epigenetics. For instance, neuro-imagery studies have shown that cognitive behavioural therapy (CBT) can alter the neural activation of the amygdala in participants with social anxiety (Månsson et al., 2016). Moreover, a review of 20 studies demonstrated that therapies such as CBT, psychodynamic psychotherapies and interpersonal therapies contribute to the alteration of brain structure for participants presenting with psychological distress such as depression and anxiety (Karlsson, 2011). Moreover, in the medical model, psychotherapy based on

humanistic values is considered an *epigenetic drug* (Stahl, 2012). In this light, from a pluralist humanist stance, one could wonder whether CoP might absorb some features of neuroscience where relevant to the profession.

1.6. Why Neuroscience?

Before addressing this question, it is essential to understand neuroscience as a field, highlight some of its useful concepts to CoP and distinguish it from other resembling fields, such as neuropsychology.

It is important to differentiate between neuroscience and neuropsychology as they are often used interchangeably in research (Goss, 2016b). One definition of neuropsychology is the study of the association between brain functions and behaviour (Walsh, 1978). Neuropsychology evolved to enhance the understanding of how brain injuries could explain alteration of behaviour, cognition and affect through the study of the brain of individuals who suffered brain injuries using neuroimaging (Fairfax, 2016). Notions such as lateralisation and locations are used alongside neuroimaging to evidence the claims. Moreover, as defined by the British Psychological Society (BPS, n.d.), neuropsychology is a sub-field of neuroscience and psychology concerned with a population of clients who present with neurological issues. It emphasises assessments to understand neurological presentations and help manage them to promote rehabilitation through enhancing clients' cognitive and behavioural processes (Exner et al., 2022). On the other hand, neuroscience is the field that studies the influence of brain changes in human processes such as behaviour, cognition, and affect (Binder et al., 2009). Neuroscience helps make sense of internal processes through various tools, such as neuroimaging and neuro-assessments (Panksepp & Biven, 2012).

Neuroscience appears to share some of CoP's values, such as the subjective expression of internal processes through the understanding and the manifestation of complex neurobiological phenomena such as epigenetics and neuroplasticity (Goss, 2015). Epigenetics is the study of how internal and external factors can subjectively change gene expression depending on the biopsychosocial context (Jiménez et al., 2018). The change could emanate from several factors, such as the socio-economic environment and the impact of others. For instance, several studies show that epigenetic changes occur not exclusively from biochemical toxins but also as a result of interpersonal and environmental experiences such as exposure to racism, sexual discrimination and economic deprivation (Kuzawa & Sweet, 2009; Thayer & Kuzawa, 2011). Accordingly, epigenetics move the understanding of our body's functioning from rudimentary animal processing based on drives and survival instincts to more sophisticated mechanisms based on the unique expression of human genes shaped by subjective experiences (Frost, 2020).

Neuroplasticity, on the other hand, is the ability of the brain to alter its structures and functions and heal from brain injuries or adapt to new situations, including cognitive training and therapy through several processes, such as the creation of new neural connections or the alteration of functions (Sabaawi, 2004). Moreover, there is evidence of the direct association between consciousness and its multiple aspects, such as intentionality, subjectivity and self-awareness and how the human brain adapts accordingly (Askenasy & Lehmann, 2013). Consequently, it might be safe to say that neuroplasticity is the brain's subjective expression and response to external and internal experiences.

To summarise, neuroscience is used and suggested as an observational and therapeutic tool for several clinical issues, such as brain injury rehabilitation (Imms et al., 2023), depression and anxiety alleviation (Alexander et al., 2019; Clancy et al., 2018).

Moreover, neuroscience enhances our understanding of biological concepts, namely epigenetics and neuroplasticity and their reciprocal impact on subjective experiences while being mediated by environmental, interpersonal and intra-psychic factors. Therefore, since CoP is concerned with individuals' growth and subjective desired change, it would be interesting to consider an integration of neuroscience into CoP.

1.7. Neuroscience Therapeutic Technologies

1.7.1. Non-Invasive Brain Stimulation

There may be a stigma and mistaken association between NIBS and Electroconvulsive Therapy (ECT). Through my own experience on the topic within the CoP community at my university and during my placement, the term ECT is often used in lieu of NIBS. Therefore, it is vital to understand the difference between these two technologies. ECT is a highly invasive intervention that shocks the central nervous system and is associated with significant physiological side effects, including motor restlessness, somatic headaches (Baldwin & Oxlad, 1996) and adverse cognitive effects such as comprehension issues and loss of memory (Kellner et al., 1997). Multiple studies, as reported in a metanalysis by Read et al., (2020), have found that the use of ECT can lead to significant adverse effects on psychological, mental, and physical health, as reported by participants. The same researchers have warned against the damaging effects of ECT and called for its immediate suspension. In addition, participants and clients who underwent ECT reported a feeling of dehumanisation and a lack of control over their lives (Coelho & Baldwin, 1999). This might be attributed to the unconscious state induced by ECT, which increases vulnerability and reduces agency (Froede & Baldwin, 1999).

On the other hand, NIBS refers to non-invasive brain stimulation techniques that do not penetrate the crania and do not cause any known major adverse effects (Hamilton et al., 2019). Unlike ECT, NIBS utilises a low electrical signal, typically two milliamperes, in therapeutic use for anxiety and depression, as noted by Alexander et al. in 2019. Furthermore, NIBS is utilised in various settings, such as rehabilitation and affective therapy, to alleviate psychological distress (Agarwal et al., 2018; Miniussi & Vallar, 2011; Wang et al., 2020). The most common NIBS techniques for treating low mood and anxiety are transcranial Alternating Current Stimulation (tACS) and transcranial Direct Current Stimulation (tDCS; Clancy et al., 2018; Xu et al., 2015).

1.7.2. The Adjunctive Use of Talking Therapies and NIBS

Based on past research regarding the impact of therapies like CBT on brain plasticity (Ritchey et al., 2011), as well as studies on the effects of tACS and tDCS on cortical structures (Miniussi et al., 2008), it seems that combining these therapies can be helpful in addressing feelings of depression and anxiety. The stimulation targets the dorsolateral prefrontal cortex, which may prepare individuals for better interaction with psychological therapies (Bajbouj et al., 2018). Studies have shown that tDCS can lower treatment resistance in individuals with depression, as demonstrated in a case study of a woman who had not responded to other therapies for over 20 years (D'Urso et al., 2013). After four weeks of tDCS, the participant showed improved mood and responsiveness to CBT. This finding should be confirmed with double-blind, randomised control trials (RCT) for robust validity and reliability. A protocol has been suggested for conducting similar double-blind RCT on a larger population of 90 participants to investigate the potential benefits of combining non-invasive brain stimulation and talking therapies for people experiencing emotional distress

(Carvalho et al., 2020). Perhaps, this type of research findings may help CPs and CPTs decide whether NIBS is relevant to CoP.

1.8. Applications of Neuroscience to Psychology and Therapy

1.8.1. Neurophenomenology and Event-Related Potentials (ERP)

Neurophenomenology is an example of the possible integration of a subjective first-person construct, such as the 'lived' experience as presented by Husserl (1983) and Heidegger (2005) and the objective field of neuroscience by mediating heteroclite notions of psychology. Neurophenomenology was first introduced in 1990. It was an attempt to naturalise phenomenology in such a way as to make it fit empirical and realist science and vice-versa. Varela (1996), who is considered the father of neurophenomenology, based this new enactive approach of neuroscience on three premises: pragmatism, embodiment and efficacy. First, phenomenological pragmatism states how lived experiences should be practically investigated with relevant tools and with a similar rigorous system as the one used in neuroscience. Second, the contextualisation of brain activities as the embodied lived experience in constant interaction with the 'world'. Third, the emphasis on the efficacy of the lived experiences over brain-body activity. In other words, it is through our subjective lived experience (first-person perspective) that the role of our body is experienced in realising intentions. These intentions were explored through studies on mindfulness, where the change in the mind induces a change in the brain, which drifts us away from the dualist debate between the mind and the brain (Froese & Sykes, 2023).

The naturalisation of phenomenology that includes neurophenomenology can be divided into 'front-loaded' and 'back-loaded'. The 'front-loaded' phenomenology approach

involves utilising insights gleaned from phenomenological research to guide third-person research practices. This methodology involves integrating phenomenological analysis into scientific protocols. For example, it might facilitate the design of experiments aiming at exploring the neural underpinnings of the differentiation between the sense of agency and the sense of ownership in relation to bodily experience (Froese & Sykes, 2023). Alternatively, the 'back-loaded' approach to phenomenology incorporates insights derived from cognitive neuroscience experiments to guide its analysis, which is subsequently interpreted within the context of the relevant phenomenological framework.

Ramstead (2015) stated that if in the past Husserl refuted the integration of naturalist science even though he adopted a neo-Kantian philosophy (the recognition of the essential nature of objects), it was because the mathematical and technological advances back then could not help the generative exploration of the lived experience. This position seems more aligned with Merleau-Ponty's later work that influenced recent research in cognitive neuroscience, such as the development of embodied and enactive approaches to cognition, as well as the advancement of the neurophenomenology (Thompson, 2010; Thompson & Varela, 2001; Varela, 1996). Other models of neurophenomenology have flourished notably during the last two years. For instance, Ramstead et al. (2022) created a computational model based on a generative Bayesian statistical model. In essence, generative models are the formulation of how causes generate consequences. In practice, the model has used notions such as 'priors' as prior beliefs on a phenomenon and the 'likelihood' of the event to happen to infer the causal results. A practical example using Husserlian wording would be: amongst all the possible causes of my *hylia* (my experience as a raw sensory data) of hearing voices and taking into consideration the conditional association between my *hylia* and my knowledge (often an implicit process) of what is causing it as partly subject to my

embodiment, what is the *nomea* (interpretation) for which I have the most evidence? To answer this question, the suggested model performs inferences using a generative model. In other words, computational phenomenology (as a third-person methodology) aims to 'formalise' elements of lived experience outlined by phenomenologists and the ones concerned with the rigorous description of a subjective (first-person) experience (Ramstead et al., 2022). This statement puts forth theories regarding the organisation and emergence of experiences, as well as how our perception of their structure helps shape the experiences themselves. For instance, Valera and the *Paris Group* researched neurophenomenology, exploring an individual's experiences (Navarro et al., 2005; Petitmengin, 2010; Petitmengin et al., 2007). The findings showed that neurophenomenology can predict seizures by observing the individual's experiences preceding them. Additionally, a recent review claimed that neurophenomenology is helpful in investigating non-ordinary states of consciousness, such as psychedelic experiences and hypnosis, and can provide insight into the flexible nature of experience (Timmermann et al., 2023).

Considering all the data, one might question whether the field of CoP, which is primarily concerned with the first-person experience, can be willing to incorporate essential aspects of neuroscience in the same way that phenomenology is capable of doing.

However, I must admit that my literature review on neurophenomenology may have been biased, as I might have unconsciously aimed to include only literature that supports integration. For example, it was suggested that neurophenomenology, being a young field, might have neglected the second and third tenets of Varela's suggestion in favour of a pragmatic approach (first tenet) to the lived experience (Froese & Sykes, 2023). Additionally, there are still some unanswered queries about the influence of phenomenology on neuroscience, such as how the enactive theory would impact neuroscience. Is neuroscience

prepared to include ‘non-neural’ information in its data analysis? Although this may be beyond the scope of the current project, it may assist in answering other questions about how CoP might affect neuroscience if an integration framework is adopted.

On the other hand the question previously asked concerning whether CoP is capable to integrate neuroscience including in research was partly addressed in Matsen et al.’s (2020) review when they suggested the integration of ERP into counselling psychology research for psychotherapy. EPR is a specific type of electroencephalography (EEG), which is one of the widest and most cost-effective neuro-imaging technology used in psychology and psychotherapy research (Mahato & Paul, 2020). The authors gave examples of the application of ERP to CoP such as understanding presentations such as perfectionism and pain from a neuroscience perspective. They also provided clinical examples of the use of EPR within the therapy session to measure in real-time responses of the client to subjective experiences such as perceived negative stimuli and positive self-talk, which also can help guide the therapist's interventions and see their impact on the client’s neural systems. Moreover, the authors suggested the use of this technology as a measurement to replace the self-reported questionnaires for a more accurate measurement of the therapy progression and outcome at multiple stages of the therapy, including before, during and after the therapy and during follow-ups.

However, these technologies might represent several limitations, including technical, practical and ethical (Matsen et al., 2020; Sabeti et al., 2020). Some pitfalls are related to non-psychological factors such as saturation of colour or brightness that can influence the result of the ERP_EGG recording, which makes the technology very sensitive and the confounding variable very strong and increases their capacity to alter the recording and, ergo, the analysis and the interpretation (Matsen et al., 2020). This is a significant limitation to

their design. Additionally, the rigorous attempt to increase the internal validity to EEG results may be detrimental to the ecological validity of the research as researchers may step away from a naturally occurring environment where psychological phenomena tend to happen to an overly controlled environment that lacks the representativeness of the real world (Coutinho et al., 2017). Finally, researchers warned against the misinterpretation of neuroscience results and their potential harm to society if disseminated deceitfully. Coutinho et al. (2017) identified two potential dangers and called them *neuroenchantment* and *neurorealism*. While *neuroenchantment* is the overestimation of neuroimaging's usefulness and placing more faith in the results than other aspects, such as subjective experiences, neurorealism is the tendency of presenting a phenomenon as uncritically real. It is then vital to communicate results accurately and use data graphics from neuroscience to support arguments instead of making them the focus and the central point of articles.

1.8.2. The Neuroscience of Trauma

Another reason to adopt neuroscience knowledge into CoP would be the extensive evidence gathered from neuroscience to strengthen the impact of the lived experience of trauma on our physical and biological beings and the effectiveness of treatments based on neuroscientific evidence (Pierce & Black, 2023). Recent advancements in neuroscience have provided practitioners with greater insight into the effects of trauma on the human brain and body. In turn, professionals in social work, psychology, counselling clinical, and other mental health fields have begun integrating this knowledge into research and treatment of post-traumatic stress disorder (PTSD; Pierce & Black, 2023). Over the past two decades, these professionals have leveraged neuroscience to enhance their understanding and approach to treating this complex condition (Tuffour, 2017). First introduced by Freud through the study of *psychic pain* and *hysteria*, decennaries later, trauma entered the Diagnostic and Statistical

Manual of Mental Disorders third edition (DSM-III) through the identification of PTSD as an anxiety disorder (Pierce & Black, 2023). The definition of PTSD back then included five criteria, amongst them *a history of exposure to 'severe stress' and re-experiencing the trauma through intrusive recollections, nightmares or flashbacks* (DSM III, 1987). McNally (2009) questioned the meaning of 'severe stress'. He claimed that DSM's definition of PTSD only considers *extraordinary* events such as war and natural disasters as traumatic and discarded the impact of *ordinary* events like divorce on the possibility of developing PTSD. Accordingly, neuroscience studies on the subjective appraisal of an event evidenced the existence of the effect of *normal events* that corroborate the PTSD's described impact and supported the overall subjective PTSD experience on individuals, including on their memory (Pierce & Black, 2023). For instance, Rubin et al. (2008) suggested a model of PTSD incorporating subjectively construed memories that are malleable over time and situations. Historically, memory formation was thought to reflect a one-time process of consolidation; however, more recent neuroscience evidence suggested a model called reconsolidation, a new model by which a memory is more likely to be recalled if it is related to intense emotions such as the ones resulting from PTSD and therefore be re-stored endless times (Rubin et al., 2008). Accordingly, while subjectively re-experiencing a traumatic event through the implicit use of their own unique re-appraisal, individuals would be overwhelmed by their traumatic memories to the extent that it will affect other aspects of their memories including their working memory until they can reach, at times, unbearable stages that can lead to suicide (Albanese et al., 2022).

The reconsolidation theory was also used for treating PTSD with the active use of neuroscientific knowledge and interventions. The Multiple Trace Theory (MTT; Nadel & Moscovitch, 1997) added to the reconsolidation theory that the alteration of episodic memory

in relation to a context helped devise therapeutic tools to help the healing of trauma (Black, 2023). In their attitudinal (position) paper on neuroscience-based therapy, Cammisuli and Castelnuovo (2023) stressed that according to MTT, memories are not a perfect record of the original event and can change over time and through recollection during psychotherapy (Lane et al., 2015). Psychotherapy can help connect old memories with new experiences, leading to considerable behavioural changes (Lane, 2020). Various techniques are used in 'memory therapeutics', including accelerated resolution therapy, cognitive restructuring, and imagery modification, which aim to reduce distress during memory recall, provide a new perspective on negative events, and transform trauma using metaphors (Waits & Hoge, 2018). During PTSD psychotherapy, it is important to acknowledge the impact of experiences gained during treatment, especially in the successful processing of traumatic memories. This involves imaginal memory retrieval, reappraisal of the event with the therapist's support, reflection on associated beliefs and emotions, and retelling of the memories (Ford, 2018). Accordingly, neuroscience might help or perhaps already help CPTs as future CPs while working with presentations such as trauma and PTSD in terms of enhancing their understanding of the client's suffering and using neuroscience-informed techniques to help the client heal the psychological and physical sequelae of their trauma.

Furthermore, CoP researchers have presented an integrative therapeutic framework that includes neuroscience within a neuropsychotherapeutic perspective (Ward et al., 2017). This article aims to provide an explanation of the neuropsychotherapeutic perspective and its application to psychotherapy, particularly in the context of trauma. The authors present various aspects of this perspective and explore how it can help us understand trauma by discussing several recent publications. They also provide illustrations of their points by describing four clinical cases. The neuropsychotherapeutic approach offers a comprehensive

integrative framework that can help to explain several dilemmas evident in the trauma literature, such as delayed onset and lack of universal susceptibility. For example, representational space (also known as the lived space shaped by internal and external experiences and language, including symbols and images) can explain why some clients struggle to integrate traumatic memories into long-term memory structures. The neuropsychotherapeutic perspective is a theoretical framework that utilises neuroscience principles and findings to inform psychotherapy research and practice (Ward et al., 2017). This approach may resonate with many CPs and CPTs whose clinical work is trauma-focused.

1.8.3. The Neurobiology of Attachment

Neuroscience has also demonstrated its pragmatic and useful application in attachment theory, providing valuable insights into this concept. Holmes (1993) observed that Bowlby expressed concern about the divide between biological and psychological approaches in psychiatry. He advanced that Bowlby hoped attachment theory, which integrates psychoanalysis and ethology, could help bridge this gap. Research in developmental psychology has identified key features of parent-infant interaction, such as responsiveness, *attunement*, and affect modulation, that determine whether attachment is secure or insecure (White et al., 2023). These principles can also be applied to the therapeutic relationship between clients and psychotherapists, including the containment within a secure base, the co-creation of a shared narrative or autobiographical competence, the processing of emotions, and coping with loss and are common features of effective psychotherapies and reflect a new interpersonal paradigm in psychotherapy (Holmes, 1993). Attachment theory posits that these principles have a solid aetiological and biological foundation, and neuroscience research has provided evidence to support some of its features that were previously and exclusively

confirmed through observational-behavioural studies (White et al., 2023). In a review of the importance of neuroscience in understanding and treating therapy, Cammisuli and Castelnuovo (2023) give a thorough account of this research. For instance, it was evidenced that the experiences a child has with their caregivers in early life can greatly impact the development of their brain, and repeated patterns in relationships can shape and affect the connections and activity of neurons in brain structures governing specific cognitive and emotional functions (Grawe, 2017; Kandel et al., 2000; Schore, 2005; Siegel, 2020). Moreover, the attachment between a baby and their primary caretakers is important in this process, linking the neurobiological programming of brain development to early care experiences. The child's bond with their caregivers plays a role in the development of certain brain areas, such as the prefrontal cortex, orbitofrontal cortex, and limbic system, which are important for interpersonal relationships and processing emotional information. These areas also influence the regulation and interpretation of emotions through factors like facial expressions, gestures, and tone of voice (Etkin et al., 2005). From a neuro-psychoanalytic perspective, it has been suggested that the right hemisphere of the brain represents the unconscious mind, processing emotional stimuli outside of conscious awareness (Cammisuli & Castelnuovo, 2023). Furthermore, early relational experiences are carried into later psychological processes throughout the life span. For example, psychological distress in parents during the perinatal period can have a negative impact on the interaction with their baby, inhibiting the development of important brain areas (Cammisuli & Castelnuovo, 2023). Conversely, when caregivers are mindful of their child's requirements, and their neuronal connections are moulded by positive environmental triggers, it leads to the child forming secure attachment styles (Cammisuli & Castelnuovo, 2023). This, in turn, prepares them with higher levels of reflective functioning and more mature defenses as adults, while also

regulating their emotions more efficiently than those with insecure attachment styles (Tanzilli et al., 2021).

1.8.4. Neuroscience and therapy

Additionally, the integration of neuroscience and attachment theories has practical implications in perinatal and couple's psychotherapy, particularly in how emotions are regulated during therapy. Perinatal Mood and Anxiety Disorder (PMAD) encompasses a range of mental health issues that can affect both mothers and fathers, including depression, anxiety, PTSD, and psychosis (Byrnes, 2018). Perinatal psychotherapy can help address these issues by considering various factors, including hormonal changes such as cortisol and oxytocin, two hormones that play a role in the client-therapist relationship and can affect the client's emotional state (Witteman et al., 2019). Moreover, research suggests that synchrony in oxytocin levels between clients and therapists can be effective in treating depression (Zilcha-Mano et al., 2020). Accordingly, perinatal therapists, including CPTs and CPs, could consider building a supportive context and syncing with the clients to positively affect their mental health and child's care based on the new parents' neurochemical and hormonal modifications. In relation to couple issues, neuroscience-based psychotherapy aims to aid each partner in comprehending their role in affecting the relationship (Cammisuli & Castelnuovo, 2023). This starts with acknowledging their personal attachment needs and psychophysiological reactions that arise within their communication with their significant other (Cammisuli & Castelnuovo, 2023). By recognising how each partner's nervous system reacts to emotional reverberations brought on by their interactions as a couple, psychotherapy can help create stronger emotional regulation and establish a secure foundation for the relationship (Goldstein & Thau, 2004). Additionally, when a couple's attachment schema is compromised, seeking treatment can be a solution, and psychotherapy can play a crucial part

in restoring the balance between partners (Schore, 2005). In doing so, when partners encounter difficulties and opt for psychotherapy, they can progressively recognise the subcortical emotional system they have built throughout their love affair, and work towards rebuilding it in a positive and constructive manner with the help of their therapist (Cammisuli & Castelnuovo, 2023). These findings support the role of neuroscience in therapy within multiple settings which consolidates its potential critical role in CoP.

Other theorists highlighted the importance of neuroscience in evidencing aspects such as empathy that strengthen the therapeutic relationship within the therapy room (Ward et al., 2017). In their article, researchers discussed the concept of empathy and its relevance in therapy within CoP. Their review included the significance of deficiencies in empathetic processes for most psychological distresses in the context of the social brain hypothesis (Frith, 2007). They highlighted its neuroscientific evidence, such as its neural correlates, encompassing both the central and peripheral nervous systems. They also included evidence on the cortical and subcortical regions involved in empathy such as emotional contagion, cognitive and emotional empathy, and self-regulation. Additionally, they provided evidence about the correlates of sympathetic arousal associated with empathetic processes and reviewed data supporting the idea of the physiological linkage or synchrony as an indicator of empathy in interpersonal relationships including in the therapy room through building the therapeutic alliance. Accordingly, findings from neuroscience including for couple and perinatal therapy and the use of empathy might be relevant for the work of CPs and CPTs through enhancing their understanding of these phenomena and using them appropriately for a better *attunement* and optimal therapy outcome.

1.9. Neuroscience: Some Limitations

It is important to take note that this thesis did not explore some important limitations of neuroscience. This includes neuroscience's tendency to minimise the significance of social context, cultural factors, and intersectionality (such as gender) in the emergence and perpetuation of psychological distress, including its tendency to adopt an essentialist perspective (Duchesne & Trujillo, 2021; Loughman & Haslam, 2018; Read et al., 2005). Additionally, the thesis did not address other potential risks of neuroscience, such as its ability to present itself as indisputable evidence in addition to its potential danger as a powerful tool for legitimising political decisions, as exemplified by the case of France in topics such as education (Brun et al., 2024). The non-inclusion of those factors in this paper does not refute their importance within the topic of the integration of neuroscience into CoP.

1.9.1. Are NIBS Non-Invasive?

Despite their promising effect on affective distress, their cost-effectiveness and bridging role between talking therapy and pharmacology, NIBS are subject to some criticism. Researchers have drawn attention to other issues and ethical problems to consider when using NIBS. First, there is the probable deceitful name of the technology. According to Davis and van Koningsbruggen (2013), the NI, which stands for Non-Invasive in NIBS name, raises concerns. They argued that applying a non-endogenous current to discrete areas, even though significantly weak, might influence brain structure and function and becomes invasive. They added that this current reach might extend to either neighbouring or deeper structures. Consequently, they suggested changing their name to minimally invasive brain stimulation. Moreover, the previous issue might contribute to the future clients' confusion on whether or not to opt for this therapy. This confusion might already exist because of the availability of

NIBS in the high street in some countries for various uses such as 'cognitive training' and 'performance enhancement'. The product description is not clear on the *real* effect of the technology and the potential exposure to dangerous outcomes due to unsupervised use (Iwry et al., 2017; Wurzman et al., 2016). Additionally, tDCS is now sold in the UK e-markets through websites such as www.desertcart.co.uk. Therefore, users might misinterpret the availability of this technology for evidence of reliability. That might mislead users' decisions on using NIBS in therapeutic settings. Consequently, it is essential to conduct studies such as the present project that would perhaps empower CPs and clients with the necessary knowledge that contributes to their decisions regarding using this type of neuroscience technology.

Another criticism of NIBS outcomes would be the correlational design of research and the overlooked individual differences factors when assessing brain stimulation effects. As correlation is far from causation, any outcome should be considered with caution (Tufte, 2008). On another note, there is a consensus on how we are all different in the face of stimuli or events. This difference is more highlighted in treatments that affect our biopsychosocial selves (Gross, 2017). Interestingly, literature reviewed by the researcher so far emphasised how individual differences factors, such as psychological predisposition and genetic makeup might mediate NIBS effects. For instance, factors such as age, gender, and hormonal levels influence the responsiveness to and the effect of NIBS in cognitive rehabilitation (Jongkees et al., 2019; Krause & Cohen Kadosh, 2014). Other research has highlighted either controversial psychopathological traits such as the psychopathy (Scheff, 1974) or hypothetical features like temporal discounting as mediators to responsiveness to NIBS (Kekic et al., 2014; Weidacker et al., 2016).

Furthermore, researchers highlighted the threat of NIBS on the self-perception, They stressed how the effect of NIBS might potentially interfere with clients' sense of self and asked some relevant questions, such as, whether humans should modify the biological 'vehicle' of their consciousness to benefit from a psychological enhancement (Bublitz & Merkel, 2014). Additionally, they were concerned about the potential lasting effects of NIBS therapy on how clients view themselves, their surroundings, and those around them. Bublitz and Merkel's (2012) paper included cognitions like individuals' general thoughts and beliefs as a component of personal identity and advanced that altering those brain functions and structures might change one's cognitions and hence change their identity and self-idiosyncrasy. While the modification in the brain after brain injuries might affect the sense of self and identity (Ownsworth, 2014), Bublitz and Merkel's (2012) position sounds reductionist since it discards the psychosocial component of personal identity. For instance, some biopsychosocial evidence of individuals who had brain injuries stressed how the sense of personal identity was not modified or questioned in the case of functional or structural changes to the brain (Yeates et al., 2008). Moreover, the same researchers highlighted how the understanding and the sense of identity and self are dynamic and everchanging depending on humans' multifaceted and complex experiences. Therefore, so far, it is not evidenced that the effect of affective neuroscience tools do or will interfere with the sense of the self in clients who will use them.

1.9.2. The Perception of Integration amongst Counsellors.

Other mental health fields, such as counselling, have considered the importance of understanding the attitudes and perspectives of practitioners on the integration of neuroscience into their professions. Luke et al. (2020) conducted research to investigate the above and claimed that innovation often precedes the establishment of ethical standards in

science and technology. Consequently, the integration of neuroscience and counselling is a prime example, as scholars are just beginning to identify significant ethical concerns related to this shift in the profession. The results of their study on the perspectives of 312 participants regarding the ethics of integrating neuroscience with counselling are presented through inductive thematic analysis. It was considered the first study of its kind to explore the perceptions of mental health counsellors, counsellors-in-training, and counsellor educators on neuroscience integration. The study identified a range of concern continuum, from no concerns to grave concerns, with a 78.2% who expressed at least some serious concerns on the integration. Furthermore, it identified four specific ethical dilemmas: a) neuroscience is not aligned with our counsellor identity, b) neuroscience is beyond the scope of counselling practice, c) challenges with neuroscience and the nature of neuroscience research, and d) potential harm to clients. Finally, the author highlighted a few points, first, how the counselling profession needs to define how much training is necessary for counsellors to practice technology-based and non-technology-based integration ethically. Second, counselling should create a scope of practice as a gauge of competence and limit risks to practising outside of one's area of competence. Third, intentional research efforts are needed to validate training standards and therapeutic outcomes related to integration. Last, the lack of empirical and outcomes-based articles in the counselling profession is concerning, and more research is needed to advance the profession as a whole (Luke et al., 2020). This was consistent with the researcher's impression of CoP since there is a scarcity of research on integrating neuroscience into CoP.

I came across Luke et al. (2020) paper during my second year of doctoral training but did not read it until after completing the thematic analysis for my first two FGs. It is important to note that some of the themes discovered in this article are comparable to the

ones I identified while attempting to understand CPTs' attitudes towards integration. However, claiming a deductive perspective in my analysis would be unethical and incorrect, given the timeline of my actions.

1.10. Attitudes

Attitudes are often considered *the crown jewel* and the most important concept in social psychology. Allport (1935) stated that attitude is the most indispensable concept throughout the field of social psychology. He defined it as "a mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935, p 810). However, the construct of *the state of readiness* was criticised and judged as a complex concept to grasp or measure (Ostrom, 2014). Nonetheless, Oppenheim (1982) offered a clearer definition when he described an attitude as a tendency to respond in a certain manner when confronted with *certain stimuli*. For this project, the 'certain stimuli' often coined as the *attitude object* is the integration of neuroscience into CoP.

Even though they might be defined in multiple manners, attitudes are an appraisal tool that helps enhance the understanding of views and positions regarding a specific topic, such as integrating neuroscience into CoP. Social psychologists differ in their definition of attitudes but agree on their very evaluative characteristics, for instance, a position for, against, pros or cons (Ajzen, 2005). Attitudes help understand the position on a topic through verbal and non-verbal responses. These responses are encompassed in three main components. First, a cognitive factor; refers to thoughts and beliefs, including images and metaphors. Second, affective responses such as emotions, feeling or physical responses and finally, conations are partly defined as the expression of the behavioural intention (Ajzen,

2005). Some theorists have pointed out that attitudes are *too broad* of a construct and can lead to a wide range of interpretations for a given set of data, which can weaken the concept (Greenwald, 1989; Pratkanis & Greenwald, 1989). Nonetheless, for this project, the broad array of interpretations is related to the subjective perspective of each participant and the interpretations of the researcher. For qualitative research with a capital Q, the flexibility and breadth of the attitude concept contribute to the enrichment of data analysis and avoid the restriction of interpretation to the social cognitive theory (Mielewczyk & Willig, 2007; Willig, 2013). Accordingly, the use of the attitude throughout the project will encapsulate the opinions, views, positions, and other subjective expressions on the topic of integration.

1.11. Research Gap and Rationale

1.11.1. Research Gap

After carrying out multiple-phase research, only three papers seemed relevant to the topic of my project. So far, very few studies have explored the broad topic of integrating neuroscience into CoP, but none of them investigated CPTs' attitudes toward integrating neuroscience into CoP. Multiple-phase research carried on PsychINFO, PsychArticles via EBSCO database, Google Scholars, the Psychoanalytic Electronic Publishing and Scopus through straightforward and advanced research (using expressions such as ‘counselling+psychologist+trainees+neuroscience', 'views’ and/or 'opinions’ and/or ‘position’ and/or ‘attitude’), however, no relevant results were returned. Subsequently, when the research criteria were broadened to keywords and expressions such as 'views+counselling+psychologists+neuroscience' I found Goss' (2015, 2016a) published papers in addition to a study (Goss & Parnell, 2017) based on his thesis (Goss, 2016b).

Goss' (2015) first paper is a theoretical essay on the importance of including neuroscience knowledge in CoP to enhance the understanding and treatment of affective distress. The article focuses on the fundamental processes of the brain and how affective neuroscience can be utilised in CoP. It is suggested that counselling psychologists are in a prime position to contribute to research in affective neuroscience. Furthermore, Goss (2015) suggested that psychiatry can also benefit and expand the knowledge base in affective neuroscience. Therefore, he concluded that there should be increased collaboration among counselling psychologists, psychiatrists and neuroscientists in order to enhance the understanding and effectiveness of therapeutic interventions for the betterment of mental health.

The second paper (Goss, 2016b) is a literature review on integrating neuroscience into CoP. The author reviewed 21 academic papers and identified several points, such as the possibility of the mergence of the two disciplines through bilateral cooperation. For instance, he highlighted how neuroscience could be the foundation of evidence for our therapeutic work as scientist-practitioners (Corrie & Callahan, 2000). He also stressed how the mergence of the two fields might facilitate the bidirectional communication and collaboration between CPs and health professionals within multidisciplinary settings. Goss (2016a) added that once this communication is set up, CPs could advocate for CoP values, such as the importance of subjectivity and intersubjectivity when using neuroscience with clients.

The third paper was based on a thesis that explored CPs' views and experiences on integrating neuroscience into their work (Goss & Parnell, 2017). The researchers used Interpretative Phenomenological Analysis (IPA) and identified six key themes that reflect the views and experiences of CPs on the topic, namely 'My practitioner identity', 'Defining neuroscience', 'There are ways that neuroscience can help us', 'The Dangers of neuroscience',

'Methods of learning and the need for training' and 'Integration: The opposition and the need – finding the balance'. The themes reflected uncertainty on neuroscience advantage and danger. He also highlighted practical questions about the knowledge that CPs have on neuroscience. Given that CPs appear to be open to the neuroscience integration debate, it might be interesting to explore CPTs' positions on the same topic.

1.11.2. Rationale

There might be many reasons why we should consider integrating neuroscience into CoP. As previously stated, Cooper and McLeod (2007) advanced that CoP is a pluralistic discipline with a political and ethical commitment to respect and integrate other fields. Moreover, Rizq (2007) argued that it is reductionist and against CoP ethos to discard biological accounts of psychological distress and think that only a subjective-oriented analysis will suffice to alleviate the client's distress. Hence, according to Rizq (2007), integrating neuroscience into CoP becomes a need. She also argued that resistance to integration might come from an everlasting duality between human and natural science, which might explain some therapists' concerns about integration. For CPs, this resistance might be paired with an ambivalence towards neuroscience. Perhaps the phenomena might relate to the fact that up until 2019, CPs could not pursue neuropsychological training as it was deemed only suitable for clinical psychologists (Fairfax, 2016). Additionally, perhaps CPTs need to consider the pluralistic and holistic philosophy underpinning CoP which might help them explore the integration possibility through research before rejecting it. For instance, flexibility and openness would be doubly beneficial to exploring integration. Moreover, as no single approach is suitable for everyone, CPTs would have access to extra knowledge and skills to use for clients who might need it, which might enhance the therapeutic alliance and the outcome of the talking therapy.

1.11.3. Research Question

As previously stated, there is no literature that explored the attitudes of CPTs on integrating neuroscience into CoP. Thorough research of the attitudes of CPTs on neuroscience, has not returned results. Therefore, it appears that a study might be needed to find whether the integration of neuroscience into CoP has any potential relevance to CPTs' duties, including clinical work, training experience and research. Accordingly, this study will attempt to respond to the research question: What are the CPT's attitudes towards integrating neuroscience into CoP? The researcher believes that CPTs' attitudes are as important as the views of trained CPs on the future of CoP as a field. They might bring a fresher view on the topic of integration to inform issues to consider if such an integration is to happen. Since qualitative research is a suitable methodology to explore the unknown, including novel topics (Willig, 2013), the researcher decided to explore the integration of neuroscience into CoP from CPTs' perspectives using a qualitative critical realist paradigm using FG as a data collection method and RTA as a method of analysis.

1.12. Chapter Summary

This chapter aimed to introduce the project, offer a 'good enough' literature review relevant to the topic of integration, and outline the research gap and the rationale for conducting the research. It ended with a research question that helped define the research paradigm that will be covered in the following section.

CHAPTER 2: METHODOLOGY

2.1 Overview

This chapter outlines the methodological strategy chosen to conduct this study. This research was based on a qualitative enquiry. A pragmatic approach was adopted with a critical realist stance using FG as a data collection method and RTA as a data analysis method. Accordingly, this chapter includes the research paradigm and the researcher's philosophical perspective, the method and procedure of the analysis and the data collection. It also covers the rationale for the theoretical framework.

2.2 Research and Counselling Psychology

Research has always been at the heart of CoP. Bury and Strauss (2006) suggested in their 'new' scientist-practitioner model that CoP relies on research to inform the practice and improve the field for the benefit of CPs and clients. Moreover, they assert that research should comply with CoP values such as subjectivity and intersubjectivity. However, the word 'scientist' from the perspective of some CPs assumes that science defined as a reductionist and determinist field might not grasp clients' uniqueness. Accordingly, this dissonance creates clashes and tensions between CoP's core values and the dominating positivist paradigm in psychology. Nonetheless, CoP has adopted a pluralist paradigm to inform practice and research, where a continuum of epistemologies and ontologies co-exist (Koumi-Elia, 2016).

2.3 Major Perspectives Informing Counselling Psychology

While conducting research, a researcher should adopt a paradigm that fits their beliefs on the nature of the world (ontology) and the nature of the knowledge (epistemology) and inform their chosen methodology to answer their research question (Morrow, 2007). Even though theorists put epistemology, ontology and methodology in a continuum of research paradigms, their terminology might sometimes be confusing (Braun & Clarke, 2022; Willig, 2013). For instance, Madill et al. (2000) divided the paradigms into three significant categories: positivism, contextual constructionism and radical constructionism. On the other hand, Ponterotto (2005) and Willig (2013) expanded this classification to five paradigms, namely, positivism, critical realism, phenomenology, social constructionism and radical relativism (critical theory). This section was informed by Willig's (2013) and Ponterotto's (2005) terminologies.

While positivism is a determinist paradigm, critical realism is less determinist and includes nonquantifiable constructs. Positivism rejects what is labelled irrational such as spirituality and other unquantifiable constructs (Keat, 1980). It adopts a determinist stance on reality by asserting the existence of a unified and 'mind-independent' truth (Tebes, 2005). Therefore, research enquiry is sought through empirical and hypothetico-deductive models based either on the association between events (correlation and regression) or causality (Willig, 2012). This model was the predominant paradigm in psychological research and helped grasp phenomena from a medical perspective (Gross, 2017). However, criticism of positivism does not only originate from its theoretical or conceptual values, it also extends to its contribution to social injustice through the exclusive representation of white Western positions and interests and the deliberate disregard for diversities (Venkatesh et al., 2013). Accordingly, there was a need for a more nuanced approach, such as critical realism. Critical

realism recognises the world's complexity and human beings as part of it and therefore brings a critical stance to the nature of truth, knowledge and reality: it also considers realism as a 'naïve' mono-perspective approach to a multifaceted concept such as psychological distress (Willig, 2012). Accordingly, critical realist research maintains the belief in a unified reality and truth and yet acknowledges the impossibility of reaching them since they are individually constructed and, hence, impossible to measure. Additionally, the influence of the researcher's 'biases' and beliefs in data collection and analysis is also acknowledged as an important element of the research (Laclau & Bhaskar, 1998).

In contrast, phenomenology takes the research enquiry to a more nuanced level where a notion of a unified reality becomes obsolete. Smith (2004) stated how phenomenology involves understanding phenomena from individual experiences. He also claimed that realities depend on individual perceptions, *ipso facto*, there might be as many realities as individual perceptions. Knowledge is also constructed depending on context and the use of language, which facilitates meaning-making (Husserl, 1983). Moreover, the researcher is viewed as part of the knowledge generation, and language is an active vehicle but is not a central component as it is in social constructionism (Willig, 2013).

Social constructionism asserts that knowledge is constructed through language. Nonetheless, its arbitrary views of knowledge do not deny the existence of truths. Accordingly, social constructionism is based on that truths and knowledge as *perspectival interpretations*, which can only emerge against the milieu of socially shared understandings. Consequently, realities become discursive and located in a social context. The researcher becomes then an architect who deconstructs the social and contextual realities and interrogates their implicit *taken for granted* aspect through the analysis of language (Derrida, 1970, 2007; Willig, 2012).

On another note, critical theorists share the same view as social constructionists but add a notion of power to how reality is generated and contextualised in a social system (Willig, 2013). Critical theory scrutinises how the 'oppressed' suffer from the construction of societies based on the use of language that empowers oppressors. The researcher then becomes an activist and endorses a critical role in representing and defending the 'oppressed' by directing attention towards social injustices (Willig, 2013). One such theory is critical feminism. While gender might not be the focus of critical theory, critical feminism sheds light on gender injustice, it induces a change in the dominating patriarchal discourse through empowering and giving a voice to women in social and psychological research (Marshall, 1988).

2.4 Research Question

This project had only one main research question. Initially, there was a secondary question. The premier question was, what are the attitudes of CPTs towards integrating neuroscience into CoP? To help answer the first question, the researcher added a secondary question: What is CPTs' knowledge of neuroscience? However, the final choice was to retain only the first main question since the secondary question seemed more directive. Accordingly, the second question was modified and retained as an introductory question in the focus group interview schedule (see Appendix A).

2.5 Rationale: The Methodology and its Underlying Perspectives

2.5.1 Positionality

I intend to start this section with an overview of my exploratory philosophical journey by describing who I am and how I stand in the philosophical continuum regarding my views on reality and knowledge. I am a former software engineer and functional analyst. My educational, social and cultural background drew me to adopt a realist and positivist stance. However, a few years ago, this immaculate and flawless certainty and belief were shaken by a philosophical earthquake while studying for my undergraduate Psychology degree. It was the most challenging life crisis after my parental bereavement. I learnt that reality and knowledge are not absolute: they represent a spectrum of nuances, from destructed constructed to orthodox realist views (Ponterotto, 2005). Since then, I have lived in uncertainty. When I think about ontology, I sometimes question the existence of a single ultimate truth. However, sometimes I cannot refute the plausible existence of a unified reality and think we may need more tools to uncover it (Gorski, 2013).

This uncertainty and hesitancy drew me away from the ontological and epistemological debate and directed me towards the curious and tentative position of pragmatism. *Pragmatism* is a philosophical position first introduced by Charles Sanders Peirce (1839–1914) in the late seventies of the 19th century (Goss & Parnell, 2017). Three fundamental ideas underpin my choice of pragmatism: first, the ontological perspective states the absence of exclusive commitment to a single view of reality, whether constructed or absolute (Goss, 2016). Second, epistemologically, pragmatism does not establish a hierarchy between science and philosophy (Kelly & Cordeiro, 2020). In other words, science and philosophy are equally essential for conveying practical and actionable knowledge. When

applied within the scientist-practitioner model, I believe pragmatism helps us put the client at the centre of the debate, which is in line with CoP's humanistic ethos and values (Corrie & Callahan, 2000; Douglas, 2016). In relation to the research topic, I think of neuroscience as a scientific tool that could be integrated within the scientist-practitioner model to help our clients understand and heal their psychological distress while acknowledging the subjectivity of their human experience.

Additionally, pragmatism best captures the pluralism of CoP in research and practice. For instance, pragmatism acknowledges the tensions between perspectives and assists in reflecting on their possible conflicting values, facilitating the use of various components from distinctive philosophical views such as talking therapy and neuroscience (Goss, 2015). In research, pragmatism helps choose a congruent research paradigm that best fits the research enquiry (Kaushik & Walsh, 2019). Accordingly, for this study, I aimed to formulate pragmatically what I thought to be the most relevant research question, namely the investigation of CPTs' attitudes towards the integration of neuroscience into CoP, and choose critical realism as a paradigm that could help answer this question (see Appendix B for a reflection on the final choice of the research question and topic).

2.5.2 Research Paradigm

I adopted the critical realist research paradigm, the intentional representation theory of language and a phenomenological-based reflexive exercise. Since I aimed to explore what I consider an unknown and non-existent phenomenon of integrating neuroscience into CoP from CPTs' perspective, I opted for a methodology that aligns with this aim, hence, my choice of critical realism research paradigm.

Critical Realism offers a solid framework for understanding a domain of interest through a tentative investigation (Venkatesh et al., 2013). It is a multifaceted paradigm that could be viewed as ontology, epistemology and methodology depending on theorists' conceptualisation (Fletcher, 2017; Laclau & Bhaskar, 1998; Willig, 2013). Critical realism as a methodology entails a realist ontology that asserts the existence of a unique reality and a relativist epistemology that contrasts this assertion by claiming that this reality becomes multiple as it is individually and subjectively constructed (Maxwell, 2012). In other words, there will be as many realities as there are individuals (Willig, 2013). However, ontologically it asserts that the absence of effective instruments to *uncover* the unified reality does not refute its very existence. Furthermore, critical realism shares, to some extent, the double hermeneutics of phenomenology. As a result, the researcher will interpret the participant's interpretation of their realities in an empathetic and suspicious form (Braun & Clarke, 2022). Additionally, critical realism recognises the researcher's influence and the participants' cultural context when interpreting data with language capturing and shaping this contextual influence (Willig, 2013). Moreover, the researcher's claim about data will also be shaped by the conceptualisation of language (Braun & Clarke, 2022).

The Theory of Language. The intentional representation theory of language guided the researcher's understanding of the data. Hall's (2020) account of the use of language within qualitative research divides language theories into three categories: a) the reflective theory in-line with the realist epistemology that supports the language's neutral and passive reflection of a unified reality. b) The constructionist theory of language claims that realities are constructed through language as a powerful and active symbol instead of a passive and neutral vehicle. c) The intentional theory of language, the choice for this project, asserts that language conveys each person's unique perspective (Hall, 2020). This locates the meaning shaped by their use of

language within their subjective reality (Braun & Clarke, 2022). For this project, the intentional theory of language was used to interpret each participant's attitudes on the concept of integration since they are subjectively constructed through language. Additionally, this theory is aligned with the critical realist paradigm adopted in this project (Clarke & Braun, 2021).

Reflexivity. Adopting reflexivity within qualitative research is a crucial skill and a requirement that helps identify biases, tensions, concerns and dilemmas throughout the research process (Lazard & McAvoy, 2020). Researchers are advised to record their research process, including internal and external dialogues (Tobin & Begley, 2004). Moreover, the analysis method RTA used in this project has reflexivity as a cornerstone in the analysis process (Braun & Clarke, 2022). As such, I started a reflexive journal in year 1 of the doctoral training, recording several initial aspects of the study, including tensions and methodological decisions (Lincoln & Guba, 1985). The journal also included my personal and professional dilemmas, such as my philosophical position and how it does not fit a specific epistemology and ontology (See Appendix C for an example of entries from the reflexive journal). Additionally, it included my awareness of some concerns, such as my *pro* position on integrating neuroscience into CoP and how I struggled to find solutions to help either bracket it or use it as a tool to produce knowledge.

Moreover, a reflexive process was documented throughout the chapters of the thesis. As stated in the first chapter, I used the 'I' pronoun to write up my reflective and reflexive process on specific aspects such as choices, tensions and dilemmas throughout the project.

Methodological Exclusions. Other methodologies, such as Interpretative Phenomenological Analysis (IPA) and discursive approaches, were excluded as I thought they could not answer the research question. IPA was considered to guarantee coherence and

consistency in the research process (Nowell et al., 2017) as it is concerned with the deep understanding of the meaning that human beings give to their experiences (Larkin et al., 2021). IPA could not answer the question as it puts meaning-making and idiosyncrasy at the heart of the research aim instead of focusing as well on patterned meaning across the data set (Willig, 2013). Critical discourse analysis, which is mainly concerned with describing and interpreting how discourses as active and dynamic constructs maintain and support social inequalities (Wodak & Meyer, 2015), did not fit the research question.

On the other hand, grounded theory (Oktay, 2012) was also considered since no theory for the phenomenon of integration exists. It might have been interesting to use iterative analysis to generate a theory on integrating neuroscience into CoP through the emergence of CPTs experiences and discussion. Additionally, recent research suggested the possible use of grounded theory within a critical realist research framework (Bunt, 2018; Hoddy, 2019). However, I was concerned that I would be too directive in my data collection and put excessive emphasis on developing a theory, which would have prevented me from analysing the data curiously and tentatively (Goss, 2016).

To conclude, I think the attitudes of CPTs on integrating neuroscience into CoP may reflect a multifaced reality (realities) expressed subjectively. These realities are individually constructed through language. They would be best approached using critical realism as a methodology, including a reflexive process crucial to qualitative research and a flexible analysis method such as RTA that could capture the complexity of such a topic (Clarke & Braun, 2021). The research method is outlined later on in this chapter.

2.6 Data Collection

2.6.1 Participants

Sixteen participants (all CPTs) from three UK universities took part in the research. Initially, 24 participants were recruited but six could not attend for various reasons. Participants were from different levels, Year one, Year two and Year three. Some trainees had finished their taught component of the course and were in their write-up year. The demographics are outlined in Table 1 below. There were no exclusion criteria for recruitment.

Table 1

Summary of Demographic Information for the 16 participants ordered by FGs

Pseudonym	Gender	Philosophical stance	Focus Group
Harry	Male	Phenomenology	1
Narjiss	Female	Critical realism	1
Grace	Female	Humanism	1
Juan	Male	Not disclosed	1
Lucianna	Female	Critical realism	1
Amara	Female	Pragmatism	1
Dalia	Female	Critical realism	2
Isabella	Female	Constructivism	2
Delphine	Female	Not disclosed	2
Angel	Female	Not disclosed	2
Trevor	Male	Social constructionism	2
Celine	Female	Critical realism	2
Elon	Male	Pragmatism	2
Imane	Female	Contextualism	3
Thomas	Male	Constructionism	3
Scarlet	Female	Critical realism	3

2.6.2 Recruitment

Participants were recruited using a purposive sampling method through a university advertisement (see Appendix D). It was planned to schedule several focus groups of a maximum of eight participants each. The three focus groups took place at UEL premises at the Prof Doc Area on the 1st floor of the AE building. The focus groups were conducted between September and December 2022.

The recruitment process was time-consuming and challenging. I aimed to recruit face-to-face focus groups. I started contacting external institutions in the spring of 2022 to prepare for potential recruitment once I had ethical approval (see Appendix T and U). I naively thought I could convince other universities for me to conduct the focus groups on their premises. I 'knocked on the doors' of six universities. Some did not respond, but many were courteous and answered. However, only a few participants contacted me via these institutions. I was tenacious and perseverant, so I sent individual emails and used my networking to reach universities through trainees, professors, and lecturers. I continued disseminating my research poster in forums and professional social media. From June until September, I only recruited one group.

I often felt stuck and incompetent as I could not receive responses for face-to-face participation and was very disappointed with the last-minute cancellations of planned groups. Obtaining an accurate headcount of attendees for a focus group can be challenging, particularly when attempting to gather a subset of participants such as CPTs (Smithson, 2000). I tried to be flexible and considered other alternatives, such as conducting the groups online. However, moderating a FG requires proficiency and erudition (Amico et al., 2011). Despite reading literature on the necessary skills for conducting FGs, attending online

workshops and conducting two pilot groups, I did not feel competent enough to conduct online groups. I was concerned about the high probability of missing the non-verbal cues and rapport-building I could get from face-to-face interactions (Woodrow et al., 2022), which are paramount to the analysis of the group dynamic, the idiosyncrasy of participants and the understanding of participants' attitudes towards the integration (Hopkins, 2007). Accordingly, I chose to tolerate the anxiety of the risk I took to conduct the focus groups face-to-face.

2.6.3 Focus Groups

Focus groups are a widespread data collection method in the psychology research (Hopkins, 2007). At first, the method was used in product marketing (Puchta & Potter, 2004). They were then used in social science to explore psychological concepts such as *attitudes* and *beliefs* (Barbour & Kitzinger, 1998). According to Vaughn et al. (1996), a FG has two core elements, a) a qualified moderator who guides the group through an established agenda or an interview schedule and b) a goal of eliciting the perceptions or attitudes of the participants towards a well-defined topic.

However, the sample size requirement for focus groups is not accurately defined. There is no consensus on the group size in the literature regarding FGs (Carlsen & Glenton, 2011). For instance, Bedford and Burgess (2001) suggest a number between four and eight for a FG to be effective. In contrast, Stewart et al. (2007) recommend that a group size between six and 12 is more effective. They advanced the possible *dullness* of a group size of less than six and the complexity of analysis and attention to a group dynamic if the number of participants is more than twelve participants. Consequently, the group size for this research aimed to be between six and 12. However, due to some recruitment issues discussed above, the size of the groups varied between three and seven participants.

Why Focus Groups? FGs appeared to be the most suitable data collection method for this project. Semi-structured interviews were the first choice for data collection. Even though semi-structured interviews are a compatible data collection tool with RTA (Murphy, 2022), It might fail to capture the essence of the research aims. As previously mentioned, the research aimed to define the attitudes of CPTs on integrating neuroscience into CoP. Morgan and Krueger (1993) support the suitability of focus groups for capturing attitudes amongst a group and fathoming out the existence (or not) of consensus by asking the participants to compare their views and opinions. This process is developed through the ability of the moderator to create a permissive and friendly atmosphere for participants to express themselves and create meaningful interactions (Morgan & Krueger, 1993). Ergo, FGs were the suitable data collection method to help identify attitudes of CPT on integrating neuroscience into CoP.

Even though attitudes may be subjective constructs, they represent a shared experience amongst trainees who could contribute to the change of the profession and its evolvement if they are empowered through expressing their attitudes and discussing them in a group (Zorn et al., 2006). Therefore, the interactions of participants within a FG are just as important as the participant's subjective perspectives when discussing a new concept like integration. Both aspects can provide valuable insights. Semi-structured individual interviews cannot uncover the synergetic effect that the group could create. In that sense, phenomena such as snowballing, security and spontaneity might occur (Fern, 1983). Snowballing happens when a comment from a participant triggers a chain of responses from others. This phenomenon can encourage the spontaneous responses of participants as they might not be faced with the obligation of answering a question but instead give their views and opinions when they feel secure and choose to do so (Fern, 1983). In addition, focus groups could

simulate the training environment that CPTs typically experience. CPTs usually train in a group by attending mandatory in-person classes and workshops (UEL, 2022). Some also receive group supervision and attend Multidisciplinary Team (MDT) meetings (Grigg, 2006). Consequently, it might be beneficial to explore how trainees can voice their attitudes in a habitual setting. Finally, focus groups can contribute to limiting the power of the researcher in the room (Ayrton, 2019). During focus group sessions, the researcher may have less influence in the room as they are outnumbered by the participants. Rather than focusing on the dyadic relationship between the researcher and individual participants, attention is given to the interaction between the participants themselves (Ayrton, 2019).

In another vein, focus groups are more cost-efficient than semi-structured interviews (Stewart et al., 2007). The three FGs recruited 16 participants, and recruiting the same number through semi-structured interviews would have been more time-consuming. However, FGs are demanding as they require time in recruitment, skills training, data collection and analysis (Puchta & Potter, 2004). Also, FGs are compatible with the method of analysis chosen for this project. Clarke and Braun (2021) highlighted the flexibility of RTA on the dataset composition and mentioned the suitability of FGs as a reliable data collection method. Furthermore, FGs could help interpret the language used by participants as a functional and constructive tool representing their unique perspective on the topic (Smithson, 2000). This assertion aligns with the intentional theory of language (Hall, 2020) applied in this project, which highlights the relevance of focus groups in conducting this research.

Limitations of Focus Groups. While conducting a focus group, attending to a few limitations is essential. In this project, I knew a few of the participants via the CoP programme, some trained in the same university but in different training years or participants who were common friends with my colleagues. Accordingly, issues such as the researcher

and participant biases could be present in this setting and compromise the quality of the interaction in the group. While researcher bias refers to the researcher having difficulty in identifying or bracketing their views to prevent influencing the participants, participant bias represents the participant's attempt to meet what they perceive as the researcher's desired result (McCambridge et al., 2012). These biases could jeopardise the quality of the enquiry (Padilla, 1993). To remedy this issue, as stated above I used a reflective journal to keep in mind my assumptions and biases since the ultimate purpose of qualitative research was not to suppress them but to identify them, reflect on them and try to bracket them when needed while understanding their functions and underlying meanings (Gough & Madill, 2012; Willig, 2013). Moreover, Hopkins (2007) stressed the possibility of FGs moving off-topic as a significant limitation. However, in the current research, moving off-topic allowed for exploration into how CPTs perceive their identity compared to clinical psychologists and psychiatrists in accessing knowledge on topics such as neuroscience. The latter was further explored during the analysis process and is outlined in the analysis section.

2.6.4 Focus Group Interview Schedule

An interview schedule was created and amended to guide the focus groups (see Appendix A). An interview schedule is a valuable guide for qualitative research, it helps formulate the questions and adapt them to the participant's population, ensuring a rich and fluid process while conducting research (Willig, 2013). Therefore, through refinement, an interview schedule helped build a rapport with participants and gather the information that answered the research question. Accordingly, the focus group interview schedule was checked and rechecked with colleagues before it was confirmed with the researcher's supervisor.

Even though I am a counselling psychologist trainee, I needed more insight into how other trainees would perceive my questions. I was mindful of my role as a researcher and how it might create a distance from my identity as a trainee. I was concerned about missing the convenient wording to formulate the questions. I first thought about how critical realism as a paradigm might be responsible for my urging desire to find *the* convenient wording as a reality. However, further reading made me realise that the issue was not exclusively related to philosophical tensions. It was essential to acquire an 'insider' view that may not be accessible to me while devising the interview schedule (Barbour, 2014). Hence my consultation with fellow trainees around the wording of the focus group interview schedule.

2.7 Ethics

2.7.1 Registration

The research was registered with the University of East London and approved by the School of Psychology before recruitment and data collection started. This study respected the Code of the Human Research Ethics of the British Psychological Society (BPS; Oates et al., 2021) and the University of East London Code of Practice for Research Ethics (UEL, 2015; 2016). To conduct studies ethically, researchers should consider several aspects, such as rigour and risk. Oates et al. (2021) stressed the importance of maximising the research benefits through a rigorous process and minimising risks for participants through careful assessment. Consequently, it gave the researcher the responsibility of caring for the participants while respecting scientific integrity. Therefore, the researcher developed a risk assessment with their supervisor, with no significant risk identified. However, during later stages of the ethical application a risk of fear of evaluation was identified and addressed. The researcher offered one-to-one sessions for participants who might have experienced this

distress or other issues. No participant took up the offer. Additionally, dedicated services' contacts were outlined in the debrief form (see Appendix E) to be consulted by the participants if any other non-identified risk emerged.

2.7.2 Ethical Considerations

The current study respected the BPS (2018) core values regarding the dignity, privacy and autonomy of the participants. However, Smith et al. (2009) highlighted the quasi-impossibility of fully preserving the participants' confidentiality since the transcript and other demographic data might be shared with others in various steps of the research process, including during publication. That said, it is important that any research offers anonymity; therefore, any details relating directly to participants' identities were protected and anonymised. Consequently, the research replaced the participants' names with pseudonyms and removed any other information that would reveal their identities, such as ethnicity and age, place and year of training.

Moreover, to conduct FGs, skills such as active listening, reflection and summarising are needed, which is consistent with the BPS code of ethics and conduct (BPS, 2018). Being a CPT helped the researcher moderate focus groups as active listening and reflection are part of their mandatory skills in the doctoral programme (Douglas, 2016). Moreover, the researcher did extensive reading on how to moderate focus groups. They also organised pilots to practice moderation before the start of the data collection.

Lastly, it was important to establish ground rules for focus groups. Even though the expression *ground rules* sounds formal for an informal discussion that happens within focus groups, it is important that the moderator define them in advance and discuss them with the

participants before the start of the group (Krueger, 2006). Setting ground rules is a crucial step for the facilitator to establish clear expectations for participants' conduct. These guidelines set the tone for a supportive and permissive atmosphere built on mutual respect between participants (Morgan & Krueger, 1993). Therefore, ground rules were formulated using Krueger's suggestions (2006). Examples of these rules were: '*to respect other participants' right to express themselves'. 'If you have a cell phone, it will be appreciated to put it on plane mode or silent'*, *'If you need to respond to it, please feel free to step away, respond to it and come back'* and *'There are no wrong answers, so all your thoughts, reflections and or questions are welcome'.*

2.7.3 Informed Consent

Participants confirmed their informed consent before the start of data collection. A participant information sheet (see Appendix F) was sent to participants to inform them about the research and allow them to ask questions, if any. They then signed a consent form (see Appendix G) upon agreeing to participate in the study. Participants were informed of their rights and the process to withdraw from the study within two weeks after the data collection.

2.8 Analytical approach

2.8.1 Reflexive Thematic Analysis.

Before providing a rationale for the method choice and outlining Braun and Clarke's (2006) six analytical stages, it is worth noting that RTA does not provide strict rules on how to analyse data. Instead, it provides guidelines to create a coherent process for producing a

‘good enough’ piece of research (Braun & Clarke, 2006). Accordingly, the study used Braun and Clarke's (2006) six-step analytical procedure of RTA to guide the data analysis.

Why Reflexive Thematic Analysis? TA which was rebaptised RTA by its founders (Braun & Clarke, 2019) is a widely used method in psychology and social science (Fugard & Potts, 2015). RTA has been used in research in counselling and psychotherapy over the last decades (Clarke & Braun, 2018). Additionally, RTA is a practical and flexible method used independently from an epistemological position (Braun & Clarke, 2006). Moreover, RTA helps identify recurring patterns in attitudes among a population (Willig, 2013). Recently, Braun and Clarke (2019) have revised TA as a method to actively promote reflexivity. RTA helps prioritise shared patterns while supporting the researcher’s understanding and interpretation of subjective meaning through reflexivity while highlighting the importance of the researcher's subjectivity and reflexivity in conducting successful research (Braun & Clarke, 2022). However, the flexibility of RTA might represent a limitation as it might be a source of a lack of coherence and consistency (Nowell et al., 2017). Nonetheless, this limitation can be addressed by adopting a clear and robust methodological paradigm that underpins the study's claims (Holloway & Todres, 2003). Accordingly, the researcher believes that RTA is the most suitable method of analysis that could help identify the attitudes of CPTs on integrating neuroscience into CoP within a critical realist research framework.

2.8.2 Recording of the Data and Transcription

The focus groups were audio-recorded, and the transcription aimed to produce a verbatim account of the participants’ interactions while following Bailey's (2008)

transcription guidelines (see Appendix H). During this process, anonymisation and pseudonymisation were performed to preserve participants' confidentiality.

2.8.3 Stages of Analysis

The analysis followed the six phases of RTA as outlined by Braun and Clarke (2022).

Stage 1: The World Exploration with Data Familiarisation. This step is concerned with three phases. First is data immersion, a phase where the data set absorbs the researcher. I read and re-read the transcripts several times. I also listened to the audio recording multiple times to attempt to reach a deeper and wider understanding of the content. The second phase is antinomic to the previous one as it involves engaging critically with data content. Instead of taking the data at face value, I started questioning the data. For instance, when a participant expresses what I perceived as two contrasting attitudes to the same question, I would note it.

The last stage of familiarisation involved immersion and critical engagement simultaneously with note-taking. It also occurred in a 'more focused' way at the end of the familiarisation, where I summarised ideas and critical notes made before the start of the coding. Moreover, some visual aids were used, such as doodles to help engage with the material (see Appendix I).

Engaging critically with the data before the coding phase was difficult as I lacked an erudite analytical sensibility. Clarke and Braun (2021) referred to analytical sensibility as the ability to critically read and interpret data as 'related to taking an inquiring and interpretative position' (Clarke & Braun, 2021, pp. 46, 47). I have successfully implemented TA for data

analysis twice during my undergraduate degree, achieving first-class grades. Nevertheless, this is my initial attempt at utilising RTA. Moreover, my past experience did not allow me to pretend to have the necessary expertise and the possession of a well-developed analytical sensibility. Consequently, I think the *tangible* critical engagement with the dataset started during the coding process as I started to know the data and gained more confidence in questioning and making sense of the participants' narratives.

Stage 2: Code, Labelling and Coding as a Process. Before diving into this phase, it is important to state a few concepts. Braun and Clarke (2021) stressed the difference between coding and codes. They defined coding as a systematic process of interpretation and meaning-making, hence the importance of subjectivity guided by a reflective process. Coding can be inductive (informed by the data set) or deductive (guided by theory), semantic (at face value or explicit) or latent (deeper and implicit). It is an evolving process that can be revisited to promote insight and build a starting block for rigorous data analysis. On the other hand, Braun and Clarke (2021) define a code as the 'output' of the coding process that ends with a label as a set of words or sentences that summarise the analytical process of each data item. During this phase, Excel sheets were used for each transcript. Each transcript was analysed individually, and codes were generated for each excerpt (see Appendix J for an example of a fragment of a coded transcript). The researcher only coded the segments relevant to the research question, as highlighted by Braun and Clarke (2021).

The coding process was time-consuming and anxiety-provoking. Even though Braun and Clarke (2021) suggested no more than two rounds of coding, I could not pause my coding process as it appeared I was looking for the *right coding*. Once again, it sounds that my ontological position for this project interfered with the analytic process. This tension provoked anxiety and procrastination throughout the coding process. However, after coding

the first transcript, I decided to pause and bring this issue to supervision and to the research consultation group at my university. The external position of my peers and supervisor brought insight. It helped refocus my coding process on my interpretation and understanding of the participant's narrative using a spectrum of semantic, latent, deductive and inductive coding, including the interactions and the dynamics within each group (See Appendix J). Even though my RTA might have been integrated, it consciously tended towards inductive and latent analysis with a vital element of interpretation, taking into account my position, positionality and any personal and professional experience that might have influenced the course of analysis.

Stage 3: The Initial Generation of Themes. This phase aims to begin identifying shared patterns across the codes that help answer the research question. Braun and Clarke (2021) emphasise the active process of this phase and how the researcher should not adopt a realist stance but rather a constructivist position. Accordingly, the themes should be constructed by the researcher, informed by the research question and the researcher's subjective experience, including knowledge and insights. While codes capture a specific meaning, themes describe broader, shared and obvious yet sometimes latent meanings (Braun & Clarke, 2022). For this project, themes were constructed separately for each group. The previously generated Excel sheets for coding were duplicated, refined and used in mind mapping to generate initial themes through colour coding (see Appendix K). Subsequently, relevant codes were clustered for each candidate (potential) theme (see Appendix L). The researcher produced two additional Excel tabs, one for 'obsolete' codes and another for 'irrelevant' codes. The 'irrelevant' codes tab included codes that did not seem to address the research question at this stage, while the 'obsolete' tab encompassed codes that no longer aligned with the corresponding excerpt when the researcher reviewed it again (see Appendix

M). The second tab included the researcher's interpretation of the group dynamic and non-verbal and verbal interactions (see Appendix N).

I struggled with generating initial themes, specifically when trying to figure out how to include FG interactions in my data analysis. I wanted to make sure I was using the best approach possible in accordance with my research paradigm. However, as focus groups are "relatively agnostic" (Flick, 2013, p. 313), there seems to be no consensus on how to analyse them with respect to the philosophical and methodological background. I felt overwhelmed by all the different methods suggested by various schools of analysis. One suggestion was to develop two types of themes, one around content and the second on the interactions (Wilkinson, 2011). My supervisor, who has relevant experience with FG research, recommended generating a synopsis of the group dynamic for each theme to add more richness to the data. However, we both agreed that the word count is limited, which threw me back to the dilemma of how to write up the themes I will discuss in the following chapter. I needed to be pragmatic in my approach and simultaneously tried to decide whether to focus on just a few themes and provide a detailed account of social interactions, dynamics, and attitudes or if I should be more descriptive and cover all the themes, even if it means sacrificing some of the essences of why I chose FG in the first place like understanding how the participants interact within a group to help answer the research question (Smithson, 2000). I recently read one thesis that used FG but did not seem to include many interactions in the reporting of data analysis (Morris, 2018). This way of conducting research did not sound right to me. I am committed to conducting my research with coherence and quality, even if it means following a more challenging path. Additionally, the literature supports the active use of group interactions while analysing focus groups (Onwuegbuzie et al., 2009). Consequently, I leaned towards the solution suggested by my supervisor and supported by

Braun and Clarke (2022). In other words, I utilised interactions as needed within a theme or facet when creating themes, rather than making themes focused solely on interactions. I think it might be a 'good enough' way to ensure that I am doing justice to my research and providing a comprehensive analysis of FG interactions. (see Appendix O For a further reflexive note on the initial generation of themes)

Stage 4: The Development and the Themes Reviewing. This phase aims to refine and review the candidate themes generated during the previous phase. It involves the assessment of the validity of the potential themes. The researcher should evaluate whether the themes give a coherent account of the dataset while answering the research question. During this phase, candidate themes might be retained or split into new themes, and others might collapse together or might be discarded (Terry et al., 2017). From this phase onwards for this project, all themes from the three groups were analysed as a whole. The researcher revised candidate themes generated during the previous phases while thoroughly re-reading the dataset. This revision helped assess the viability and the coherence of the themes (Braun & Clarke, 2022). For instance, some themes could not fit the overarching themes for several reasons and were clustered under the name of *Orphans*. Others turned out to be codes that were integrated into other themes, whereas others did not seem to answer the research question. Moreover, themes were retained for the final map if they were represented in the three groups and contributed to by at least two participants from each group. Consequently, a new Excel sheet of themes that best capture the essence of the data set from the researcher's perspective was generated and discussed at length with the supervisor (see Appendix P, Q and R, S).

Stage 5: Redefinition and Refinement. This stage helps 'fine-tune the analysis (Braun & Clarke, 2021). Each theme should be demarcated and tell a meaningful story

relevant to the dataset. Accordingly, the researcher created a summary for each theme and named it. The names were discussed and reviewed with the supervisor and the researcher's peers to find the balance between informative yet creative names for each theme (Braun & Clarke, 2021; see *Figure 1* for the final map).

Stage 6: The Final Product. This phase involves evidencing the coherent and meaningful work conducted throughout the analysis via a comprehensive write-up of the results (Braun & Clarke, 2021). The researcher presented, to the best of her ability, a comprehensive story through the presentation of themes. Each theme was illustrated via a sufficient number of excerpts that captured the essence of the theme and evidenced its relation to the research question. This phase was thoroughly reported in the next chapter, including a reflexive account of the process.

2.9 Research Quality

While conducting qualitative research, it is important to understand what makes the research a 'good enough' piece of work that ensures quality and validity (Smith, 2004). Therefore, the principles suggested by Yardley (2000) were followed to conduct this study. Yardley's (2000) criteria assess key areas for qualitative studies, namely sensitivity to context, commitment and rigour, transparency and coherence, and the impact and importance of the research (Smith, 2004). Those principles are introduced in this section and evaluated in the fourth chapter.

Sensitivity to context refers to the importance of setting the contextual scene for the reader, including the philosophical background, and theory, and giving a thorough account of previous research (Yardley, 2000). According to Yardley (2000) qualitative research should

also adhere to criteria such as commitment, rigour, transparency, and coherence. While commitment involves prolonged engagement with the topic and immersion, rigour means the completeness of data collection and analysis, including interpretation at different levels (Yardley, 2000). Transparency and coherence relate to clarity and persuasiveness of the description and argumentation (Yardley, 2000). A convincing transparency can be achieved by detailing every aspect of the data analysis process while reporting and by presenting excerpts that support the narrative (Yardley, 2000). Last but not least, impact and importance help identify the value of research depending on practical applications, and relevance to the community (Yardley, 2000). Some research may offer valuable insights but have limited practical import (Yardley, 2000), Also, qualitative research can complement quantitative research by providing socio-cultural context and shedding light on the meaning and function of attitudes (Yardley, 2000). Accordingly, 'good enough' research can result in a close fit between research and practice.

It is important for the researcher to evaluate the respect of these criteria within the limitation of their research paradigm (Chamberlain, 2004). Accordingly, the evaluation in the discussion was limited to the application of the criteria within a pragmatic choice of the critical realism paradigm.

2.10 Chapter Summary

This chapter provided a rationale for the chosen methodological strategy in this project. My goal was to expose the underlying reasons for pragmatism and outline my difficulty subscribing to a unique epistemological and ontological position. Therefore, my pragmatic choice for a critical realist paradigm was informed by the research question that aimed to gather CPTs' attitudes towards integrating neuroscience into CoP and helped

identify focus groups as a suitable data collection method as CPTs train as a group in workshops, triads and supervision while having their unique and subjective stance. RTA was a flexible and pragmatic analytical method that helped answer the research question.

CHAPTER 3: DATA ANALYSIS

3.1 Overview

This chapter aims to report the findings. Three overarching themes were identified and are reported in this section (see Figure 1). The first overarching theme was named 'Attitudes on neuroscience' and included three themes, namely: 'What is neuroscience? An uncertainty and confusion around neuroscience.', 'Neuroscience: a persona non grata' and 'Neuroscience has a lot to offer'. The second overarching theme, 'Integration between the good, the bad, the ugly and the existing', encompassed four themes: 'A positive attitude towards integration', 'A rejecting attitude towards integrating neuroscience into CoP', 'Neuroscience is already here: Let's name the elephant in the room!' and 'What is needed before the integration?' Last but not least, the third overarching theme, 'On being a CPT and identifying with CoP ethos and values', consisted of two themes: 'CoP's defensiveness might drift us away from what it stands for' and 'Who are we? An identity crisis'.

Figure 1

The final thematic map

Overeaching-themes	Themes
Attitudes on neuroscience	Do we "really [...] really" know what neuroscience is? Between uncertainty and a lack of knowledge
	Neuroscience: a persona non grata
	Neuroscience has a lot to offer
Integration between the good, the bad, the ugly and the existing	A positive attitude towards integration
	A rejecting attitude towards integrating neuroscience into CoP
	Neuroscience is already here: Let's name the elephant in the room!
	What is needed before the integration?
On being a CPT and identifying with CoP ethos and values	CoP's defensiveness might drift us away from what it stands for
	Who are we? An identity crisis

3.2 Reflecting on the Writing-Up Process and Making Choices

The write-up process was painful and restricting. I was feeling frustrated and anxious as I was unsure if I was lacking depth and thickness in my data analysis reporting. At times, it seemed as though I was merely scratching the surface, and I feared that going deeper would have consumed too much of my word limit. I may have underestimated the richness of the data that I collected and struggled to find the right balance between quality and quantity while choosing my excerpts. The excerpts I selected seem to be long, which caused me to constrain my writing to only a few *concise* sentences that include the interpretive and the reflexive part. At the time, I wondered whether I was experiencing a language barrier (as English is not my first language) or if I was simply not understanding what the economy of expression truly means. As I was reading through previously submitted theses, I noticed that there was no consensus in reporting styles, so I am hoping that following Braun and Clarke, (2022) suggestions for a write-up and taking onboard my supervisor's feedback would guide me throughout this process.

To ensure my commitment to being faithful to the data, my participants, and myself as a researcher, I took a pragmatic approach. In that sense, I made sure to report relevant themes that help answer the research question and discarded themes that seemed secondary to answering the research question. This technique, encouraged by Braun and Clarke (2022), allowed for a relatively more thorough analysis despite a limited word count, which encourages depth and reduces breadth (Agar, 2010). Moreover, other theorists suggested the selective reporting of qualitative results to comply with the word limitation. For instance, Wolcott (2009) in his firth chapter on *tightening up* the data analysis write-up suggested “a

mechanical bent for helping authors comply with space limitations." (Wolcott, 2006, pp. 95), and added:

"Do less, more thoroughly" is my maxim, and the zoom lens on a camera provides an analogy for the principle in action. If you want to take in more of the picture, you must sacrifice closeness of detail; if you want more detail, you must sacrifice breadth." (Wolcott, 2006, pp.95).

Accordingly, the themes, namely: 'Neuroscience has a lot to offer' and 'What is needed before the integration?', were not included in this report and were added to the appendices' chapter (see Appendix V and Appendix W).

Moreover, I incorporated a range of both illustrative and analytical reporting methods in presenting the data. In some cases, my report was solely illustrative when the excerpts were examples of the analytical narrative, which gave the narrative a descriptive trend. However, analytical reporting occurred when the extracts and my interpretative account of a theme became more 'knitted together'. Braun and Clarke (2022) recommended this approach of using a spectrum of reporting.

Finally, for this project, I have chosen to separate the analysis from the discussion. Even though RTA authors discourage this practice (Braun & Clarke, 2022), they agree that in applied research and thesis reporting, separating the two might be recommended for more clarity in terms of implications, limitations and recommendations.

3.3 Attitudes on Neuroscience

This overarching theme groups three main themes all around attitudes on neuroscience, namely: 1) 'Do we "really […] really" know what neuroscience is? Between uncertainty and a lack of knowledge', 2) 'Neuroscience: a persona non grata' and 3) 'Neuroscience has a lot to offer'. The development of the themes involved the contributions of 12 participants for the first theme, 14 for the second, and eight for the third theme.

Only the first two themes will be outlined below for reasons previously mentioned in earlier sections. However, a detailed analysis of the third theme can be found in Appendix V.

3.3.1 Do we "Really […] Really" Know what Neuroscience is? Between Uncertainty and a Lack of Knowledge

The theme was chosen because it was prevalent throughout the dataset. When asked about what came to their mind when they heard the word *neuroscience*, participants expressed a common sentiment of confusion and a lack of knowledge. Some participants seemed unsure about what neuroscience was and whether they were qualified to discuss it due to their perceived lack of knowledge. Other participants who had not previously received any training or shown interest in neuroscience were particularly tentative and seemed confused when answering questions or joining in the conversation. An excerpt from Elon in FG2 illustrated this point:

> "[…] it's like this image of a brain Dr. Guy on a white coat and maybe [him and] his adept are trying to identify neurological, sort of correlates to psychological issues. So you could tell you the biological markers in the brain of depression or whatever it might be. And it feels like it's well beyond my understanding and I should probably know a little bit more, in fact a lot more than I do of the structure of the brain and how it is lit up in different areas depending on what we experiencing psychologically. So the whole thing's a little bit scary I guess because it's beyond my understanding and I feel like I should know it and I don't." (FG2: 45-55)

Elon's confusion about neuroscience appears to be rooted in the contrast between his knowledge of neuroscience and his guilt around not knowing enough. This was evident in his interaction with Angel when he asked a question about the chemical and electrical activity in the brain.

> Elon: "Who here could talk about incoming signals where that's ex, whereas that's picked up by the brain and how that translates and goes down to the brain stem towards the release of chemicals in the body."
>
> Angel: "You just did. (Laughter)" (FG2: 738-742)

Angel's humorous response suggested that Elon may know more than he thinks he cares to admit. Similarly, this confusion and lack of knowledge were expressed by Amara in FG1, when she gave a textbook definition of neuropsychology - Neuropsychology studies the effects of brain injuries on behaviour, cognition, and affect (Fairfax, 2016) - while trying to make sense of what neuroscience meant to her:

> "[…] It makes me think about brain injury. […] I bumped into a lot of research with brain injury and how that can influence the psychological aspects of clients. And I realise how much I don't know about brain injury, how our brain can be affected. […] So I see how the topic is quite related to what we study, but at the same time I feel like I don't know much about it." (FG1: 44-55)

Amara sounded tentative and seemed aware of not knowing much about neuroscience. Her use of the verb to *bump* might indicate a serendipitous and accidental knowledge that perhaps lacked intentionality. Accordingly, confusion between two perceived similar fields, such as neuroscience and neuropsychology, can be a natural result.

On a parallel note, the lack of knowledge for participants who claim to have had previous knowledge in neuroscience either through previous training, or personal interest took a broader dimension which included their perceptions of other CPTs' lack of neuroscience knowledge, including the absence of neuroscience knowledge in their respective doctoral programmes. Let's consider Narjiss' excerpt from FG1:

> "So I think I was just fortunate enough to know about neuroplasticity. But most people don't know when I've spoken to other people, other peers within the field, they didn't know about it or just have very limited knowledge of it." (FG1: 129-133)

It appears that Narjiss acknowledges her knowledge of neuroscience, even though she would describe it on other occasions as *"disjointed"* (FG1: 155,158), through her gratitude for being able to understand some of its fundamental notions, such as neuroplasticity (Schwartz & Begley, 2002), and how this has helped her understand some concepts related to CBT as a therapy (FG1: 124-136). However, she seems apologetical about how other CPTs

don’t have this knowledge that appears to be important to her. This attitude was shared with Thomas FG3, who expressed the same gratitude for knowing about neuroscience and, at the same time, noted its absence from the CoP-taught material at his university:

> “I think if we start with even the course, […] I don't think it was ever mentioned at the structure of the brain or what parts of the brain do. I think all, a lot of my more recent knowledge of the structure of the brain and what the brain does is really from placements […] this is what happens to the brain when people are experiencing anger […] But I don't think we really study that really at all.” (FG3: 495-507)

Thomas seemed to express the same gratitude for knowing about neuroscience and highlighted its usefulness in understanding psychological distress while emphasising its absence from his CoP university curriculum.

To summarise, participants shared the experience of either confusion about what neuroscience stands for or a consensus on the fact that there is a lack of neuroscience amongst CPTs and within the CoP-taught programme. It appears that the three groups agree on the absence of neuroscience in their taught programmes which explains their lack of knowledge of neuroscience. This absence might also explain the attitude of the participants who experience their knowledge as *disjointed* or might feel guilty for not knowing enough. However, it seems that participants know more than they might realise about neuroscience which creates a discrepancy between what they do know and what they think they know.

3.3.2 Neuroscience : a Persona non Grata

Initially, this theme was considered as an overarching theme (See Appendix P for early stages of theme mapping). It captured the essence of neuroscience as an unwanted construct, whether as a field or integrated into CoP. However, it became clear that the master theme was not independent as it overlapped with the theme 'a rejecting attitude towards integrating neuroscience into CoP'. Consequently, the theme was divided into two sub-themes, 'neuroscience as an unwanted field' and 'neuroscience as an unwanted integration'. The first sub-theme became the current theme, 'neuroscience: *a persona non grata',* and the latter was merged into the theme 'a rejecting attitude on integrating neuroscience into CoP'. This theme was expressed in most of the participants' talks regardless of their attitudes towards integration. If we take Harry from FG1, who clearly stated an anti-integration position, he used expressions such as *"not empowering"* (FG1:356) and repetition such as *"Science. Like very scientific"* (FG1: 11) to emphasise how neuroscience is against what he stands for as a person and a practitioner who adopts a social-constructionist philosophy. He regarded neuroscience as a hazardous, undesirable, and dismissive field.

> "[…] when I think neuroscience, I think it's biology, very […] scientific, but then if we are thinking about the subject of experience, I think that can be quite dismissive because we've come in with this predetermined thing, this is a research is what it shows, here you go."

Harry also described later an embodied rejection when hearing the language that participants used to discuss NIBS. It sounded like there were not enough words to describe his strong reaction towards neuroscientific therapeutic tools.

> "Oh my god I think it's just the language. Perform. Prescribe. Yeah. Oh my gosh!" […] It was just like the hairs (Harry showing his arm hair raising). (Other participants are laughing) Do you know what I mean? And there's another word you used as well. You perform prescribe..." (FG1: 1226-1230)

Harry's reaction might be evidence of the existent non-acceptance of neuroscience amongst CPTs. It reminded me of the presentation of my research proposal, where when I pronounced the word neuroscience it seemed to elicit strong reactions from my colleagues and professors. It was not as strong as Harry's but quite similar. Some of my colleagues already talked about ECT and how it was not ethical to *zap* clients. The verb *zap* is also used by Harry when he says:

> "It's like it's a risk zapping people's brains like oh one step away from lobotomy […]" (FG1: 1336-1337)

Accordingly, Harry's verbal and non-verbal language seems to infer that neuroscience, including NIBS, is a persona non grata. However, it is unwise to associate Harry's attitude exclusively to a bias against or an *irrational* fear towards neuroscience since the danger of the misuse of neuroscience is real and was backed up by a multitude of research, including its potential impact on the increase of the stigmatisation of mental health distress and its reductive and essentialist nature that cause self-blame and prejudice to clients who are already suffering from this distress (Loughman & Haslam, 2018).

Other participants highlighted the institutional dichotomy between science and psychology and how the non-acceptance of neuroscience is systematic and systemic, including in education and in private practices. To illustrate, Narjiss from FG1, who did her

degree in another country, noticed the systemic separation between psychology and neuroscience when she said:

> "I think it's also the system. Because I remember my master [a psychology conversion degree], they had to start with teaching us about the anatomy of the neuron […] it […] felt so wasteful to me because I already knew this, but so many people didn't because they just did not come from a science background. So they just didn't know it. And it was taught at the master's level, and it was basic to me, 10th-grade science. So it starts from there, not knowing." (FG1: 456-464)

Narjiss seemed to imply that in foreign nations, students are exposed to a more comprehensive education from an early age, which allows them to have a broader understanding of various areas of knowledge. Narjiss claimed that is not the case for students in the UK, which she believes leads to individuals who are overly specialised and may be resistant to exploring unfamiliar territory due to fear and apprehension. Trevor, in FG2, also mentioned a similar contrast when describing his experience obtaining a Master's degree in psychology in the UK.

> "[…] I think the only thing […] was taught is separate, not embedded in maybe in counselling or psychology and social psychology […] which makes it already, I feel like we are separated already, […] something unconsciously that's done to students without noticing that that's why this bit of okay from when if we take this direction, this route, then you don't need to also incorporate this route. But I found it, it's something that's there in many areas in particularly from here there are boxes, you have to be there, you have to do that. You have almost, there's no, it's almost like things don't have to mix. Things don't." (FG2: 222-233)

Trevor's use of language reveals a hidden power at play, with the feeling of a covert and systematic agenda for separating psychology from neuroscience. He seems to highlight how the process happens so naturally (unconsciously) that it can be hard to detect or question. This same implicit agenda was echoed by Elon in FG2 while describing the absence of neuroscience in CoP training.

> "[…] I think even though they haven't said it explicitly, reading between the lines that the agenda has been fairly clear, we've been steered towards being an anti-medical model to distinguish ourselves from diagnoses […] And that's what we concentrate on in that human part to it." (FG2: 250-256)

It appears that Elon was suggesting that the CoP program at his university promotes Othering of fields that are different from CoP, which could increase this fear of the Other, and since we do not know what the other is, it becomes *dangerous* and *scary*.

On a slightly different note, Amara highlighted this dichotomy on a professional level and gave an example of private practices that might experience a lack MDT. She said:

> "I think there is a problem in the system because I work as assistant psychologist and […] clients who choose whether they want to see a psychiatrist or a psychologist. Cuz it's a private practice. And a lot of times clients will have this idea. I either have to choose one or the other. I tried psychology […], my brain doesn't work with that. I need medication. And then it's constantly kept separate. […] I wish I can talk to the system and say, why do we not work together to help the client?" (FG1: 484-493)

Amara seemed to denunciate the separation between a psychological and a biological stance on psychological distress, which implies that a person is either functional enough to have therapy or there is something wrong with their brain, and hence only a medical approach is the answer. This might reinforce the very 'what is wrong with you' that applied psychology professions such as CoP and Clinical Psychology aspire to abandon to the benefit of the 'what happened to you' approach (Johnstone & Boyle, 2018).

The Focus Group's Dynamics and Interactions. This theme was associated with disagreements and tensions among the participants. Some of them were highly interested in neuroscience and appeared to be triggering those who had opposing views. It seemed to me that this could have made the latter group feel a little intimidated and attacked at times. In one instance, during FG1, Grace and Harry's interaction was marked by interruptions and talking over each other without any pause. Harry's eye-rolling indicated that he was irritated and felt under attack.

Grace: "=But that's dismissing theirs so you don't believe in the"

Harry: "[I'm saying that's just me.] (Harry rolled his eyes)"

Grace: "That's your view. Yeah. Your belief."

Harry "[…] [not saying counselling psychologists I'm just saying as Harry…]" (FG1: 771-775)

It appeared that Harry would become defensive and express himself through the use of expressions such as *this is only my view* and *I am not dismissing other's views*. However, Harry called himself "*a black sheep*" (FG1: 1520;1522) on another occasion, which might indicate his awareness of how his views might contrast the other participants' positions.

During FG2, Dalia appeared combative towards any form of neuroscience exclusion. She raised her voice, frequently interrupted participants who showed no interest in neuroscience, and even challenged their perspectives.

> "But why you keep thinking clients? Who said you're going to use that knowledge with clients? […] Why you keep thinking that we're going to use measurements, et cetera, to clients?" (FG2: 756-760)

At this point, I thought that Dalia's behaviour became that of a bully. It was up to me as a moderator to restore balance and create a friendly and respectful environment (Puchta & Potter, 2004). To discourage Dalia from dominating the conversation, I used non-verbal cues like using my hand to stop her from interrupting others and interrupting her and giving someone else a chance to speak. Moreover, I had to remind the group of the grounding rules (Morgan & Krueger, 1993).

In the third group, Imane displayed what I considered to be a *fawning* attitude – in reference to Walker's (2003) word *fawn* to describe the stress response when a person adopts a conciliating attitude to prevent retaliation and harm in situations of danger - Although she held rejecting views to neuroscience and considered it to be against her, she seemed a bit lost between the two other participants who seem to have extensive knowledge on neuroscience. Prior to the recording, Imane expressed her lack of neuroscience knowledge. During the interactions, she avoided eye contact and spoke in an anxious tone. It appears that she may have been a little intimidated by the other participants, which could explain her ambivalence towards neuroscience and its integration into CoP. One of her first interactions can illustrate this ambivalence:

"[…] I decided to embark [in pharmacy studies] I realised I can't be handling boxes and something I don't believe in […] I found the neuroscience aspect of it […] it was very pharmaceutical led […] that […] put me off neuroscience, but [...] when you speak about trauma (addressing Thomas) […] it's so relevant. And I think our discussion here is making me realise how there's a massive bridge that needs to be covered […] I work [in] an acute mental health ward and I see people […] in peak crisis. But I see now that medication has its place. But I also see that actually they also benefit from a combined method of having the medication, also having talking therapy […] But yeah, <laugh> clearly there's a need for it, and it has its place." (FG3: 112-159)

Imane tentatively mentioned how neuroscience *puts her off*, but then expressed an eye-opening moment as if she realised the importance of the biological aspect in therapy for the first time. However, she contradicted herself by saying that while working in a ward, she recognised the importance of neuroscience, medication, and the biological aspect in treating

psychological distress. This instant change of opinion could be associated with stress due to the strong pro-neuroscience stance dominating the group.

Overall, this theme highlighted the lack of acceptance of neuroscience as a valid form of knowledge or a contrasting philosophy within CoP. This might have linked back to the division of psychology as a field and its separation from other fields, such as neuroscience. The topic also elicited strong reactions from participants, causing some to display either slightly aggressive or fawning attitudes towards neuroscience and towards each other.

3.4 Integration between the Good, the Bad, the Ugly and the Existing

This overarching theme counted four themes about CPTs' attitudes on integrating neuroscience into CoP, namely: 1) ‘A positive attitude towards integration’, 2) ‘A rejecting attitude towards integrating neuroscience into CoP’, 3) ‘Neuroscience is already here: Let's name the elephant in the room!’ and 4) ‘What is needed before the integration?’. The development of the themes involved the contributions of 10 participants for the first theme, seven for the second, and eight for the third theme.

For reasons previously outlined, only the first three themes are reported below. However, a detailed analysis of the fourth theme can be found in Appendix V.

3.4.1 A Positive Attitude towards Integration

This theme encapsulates a panoply of facets and subthemes across the data set. The expression *positive attitude* encompasses any receptive stance towards incorporating neuroscience into CoP. It ranges from the necessity of integrating neuroscience to suggesting how to integrate it while transiting by its importance for clients and the profession within a pragmatic and holistic framework.

Juan, in FG1, praised the importance of neuroscience within CoP.

> "[…] I don't see it [neuroscience] as something separate or as an approach. It's just a different way of looking at things that would add more richness to our practice. Because in line, I guess with our core values and being more pluralistic and looking at the person as a whole, we can't ignore the biology." (FG1: 930-935)

Juan appears to highlight the importance of ditching the dichotomy of seeing neuroscience as a disparate field. He also highlighted the holistic perspective that makes neuroscience and CoP complementary fields, which can help grasp the bio-psycho-social multifaceted nature of psychological distress and enrich the practice of CoP. Accordingly, he stressed the importance of the biological stance while approaching psychological distress, which was shared by other participants, including Narjiss, who took the example of trauma and attachment to convey her argument about the necessity of integrating neuroscience into CoP as it will give a fuller picture of the issue:

> […] I've read a lot about how trauma affects your nervous system, especially childhood trauma […] we are still talking about trauma, but we're going at it from a social perspective, from a cultural perspective but also from a neuroscience perspective. I think that's what I wanna see. That to me integration would be that where we get all sides of the story. Yeah, I mean I don't have much knowledge about this but I've also read a little bit about attachment theory and the basis in neuroscience as well. So yeah, it's just saying that this is a theory, this is where it happens, but then there is basis of that in neuroscience." (FG1: 682-692)

Narjiss seems to take the argument of integration even further, suggesting that the tools used in CoP are theories that have a physical vehicle and base called neuroscience, making neuroscience this valuable piece of evidence that has a lot of credit. She also expressed a wish for a holistic approach where CPs can use the necessary tools to understand *all sides of the story* for the benefit of the client's well-being. This view might underlie a practical and pragmatic vision of therapy and psychological distress.

Angel from FG2 also highlighted this pragmatic perspective on the importance of integrating neuroscience since it seems aligned with CoP values when she said:

> "[…] I don't think there are any specific values that are against integrating different approaches as long as they are evidence-based and are towards the benefit of the client. As a result, I cannot think of anybody who can stand in the way of integrating something that would enhance your understanding of the client's difficulties and helps achievement with that." (FG2: 948-953)

To Angel, it appeared that incorporating *evidence-based* methods like neuroscience was not just an option, but a responsibility and a duty that CPs have towards their clients to the extent that resistance to such a pragmatic approach sounded unthinkable to her.

This pragmatic approach was expressed tentatively by Scarlet from FG3:

> "[…] it's not just about us. I think counselling psychology. There is this concern and worry that about the identity or losing that identity. That's not the aim. I think we are all working towards understanding the client and what's important to the client. So if that's going to help the client, if that's going to be important for the client to get better, then I think it's important that we should also include it in our training program, learning about it, because it's all about the client, not us." (FG3: 772-779)

Scarlet seemed to imply the existence of an identity crisis within CoP (refer to the third overarching theme for a detailed account of the identity crisis). She also stressed the importance of being humble and stepping away from this crisis that CPs might experience and practically put the client in the centre of the debate when it comes to integrating a tool that might be of help. She also added another facet to the importance of integration by suggesting the inclusion of neuroscience in the training programme. The latter was also shared by Imane, who highlighted a few benefits of integrating neuroscience into the training,

> “I think it starts off with the course, isn't it? It's educating us to be able to educate our clients to be able to incorporate knowledge into our therapies, to have to tailor when we're out there practicing on our own. And we don't have to do it privately, we don't have to be shackled into a model with an organisation or whatever. You can run freely within me within reason. And then you to be able to have that knowledge base of actually knowing when to sign post this person for other help. And that is going to come with knowledge. So I think one of the implications would be, it would be beneficial on our educational level, better therapy, but better therapeutic outcomes and maybe a genuinely holistic form of care.” (FG3: 757-768)

Imane named the benefits of integration and highlighted how neuroscience would help in psychoeducation, and better signposting when appropriate and better therapy outcome, which suggested a *holistic form of care*. Moreover, she stressed how neuroscience could be empowering for future CPs as it will be a leverage that helps negotiate some imposed organisational stance on therapy. However, and as I mentioned earlier, Imane's views might seem ambivalent to me because of the reasons stated before. As a precaution, I believe it is best to approach her eagerness for integration and the suggestions she presented with caution.

The empowering aspect of the integration for CPs was also shared by other participants, such as Amara from FG1, who emphasised how learning about neuroscience will help CPs grasp psychological distress, which help clients in the therapy room before considering signposting:

> “I think it would be on the basis of my client's needs and what I see. Let's say that I wouldn't have that knowledge in neuroscience. I would probably refer my client to another counselling psychologist or to a psychologist. But I would not try to think from the biological point of view because I'm lacking of that knowledge. So I would probably consider that aspect as well and try to understand what is the client needs, what are his needs?” (FG1: 1053-1060)

Amara seemed to consider the lack of neuroscience knowledge as a handicap that might hinder CPs capacity to help clients for whom understanding the biological aspect of their distress is important. Whilst Amara described the empowering aspect of the integration for CPs, Lucianna highlighted how the integration could be empowering a specific population of clients:

> “I think on the contrary, it would be very empowering to clients for us to have at least an acknowledgement that distress could possibly be coming from a biological point of view. Because that then means that regardless of, because they might be feeling like that so mean it would let me be with them in that kind of a mindset.” (FG1: 1158-1163)

Lucianna explicitly communicated her disagreement with Harry, who claimed that CoP is enough and does not need integration, especially from a perspective that is against his values. Lucianna highlighted the importance of using neuroscience for a specific population of clients who need the biological stance to make sense of their psychological distress, even though this might not appear aligned with some CPs' perspectives on CoP values. Accordingly, she implied that having this neuroscience knowledge will help validate and normalise the clients’ experience.

Other participants linked the importance of neuroscience to CPs' duty as advocates and leaders (Fassinger & O'Brien, 2000) working within the Power Threat Meaning Framework – a framework that acknowledges humans as embodied individuals, who interpret their experiences based on their relationships, social interactions, and cultural surroundings (Johnstone & Boyle, 2018). For instance, Scarlet FG3 highlighted the importance of neuroscience to advocate for clients when she said:

> "But we don't really learn those stuff [neuroscience] in this program. And how can we advocate for a client in an MDT meeting if we don't know have it? I don't think I would feel comfortable to talk about those things in an MDT meeting. So I might just stay silent because I don't have enough information perhaps to just be an advocate for those clients." (FG3: 540-545)

It appears that Scarlet believes that a lack of knowledge in neuroscience could lead to a failure to remain loyal to the identity of CPTs as leaders and advocates. She thinks that not being well-versed in neuroscience could hinder CPTs' ability to advocate for clients in MDTs. As a result, CPTs may end up taking a passive stance that can further the interests of a system that does not always prioritise clients' best interests.

Similarly, Thomas from the same group highlighted the importance of neuroscience in relation to the Power Threat Meaning Framework.

> "I love to explore the lived experience of the individual and particularly this new power threat meaning framework. Really changing our viewpoint on how we look at problems I guess that people are having. And it's not what is wrong with you but what has happened to you, something has happened to this body, this individual both psychologically and physically. And we know even with the various therapeutic techniques that we do use, that there is a relationship between the mind and the body." (FG3: 317-325)

It seemed that Thomas has found the golden thread that links neuroscience, CoP and the importance of adopting an anti-medical stance for the benefit of Power Threat Meaning Framework. He implies that adopting neuroscience is not necessarily synonymous with adopting a diagnosing framework such as the medical model. He also seemed to have found a place for neuroscience within the Power Threat Meaning Framework (Johnstone & Boyle, 2018).

On the other hand, other participants suggested forms of integration other than in the therapy work or CoP training. Dalia from FG2 enthusiastically suggested the use of neuroscience research to inform CoP practice:

> "[…] we can adapt and take more research from neuroscience or clinical psychology." (FG2: 510-511)

Dalia responded to the fact that CPs, as a small population, do not produce enough research. She suggested a flexible framework where the integration of neuroscience would be the active use of its research to inform the CoP profession from the scientist-practitioner

perspective. She also, on other occasions, suggested the importance of considering NIBS as a therapeutic tool to integrate into therapy.

> "[…] for example use more neuroscientific tools. I don't even think that in clinical psychology they do that yet. That's like, what are these called? These devices? For example, I don't know those non-invasive methods. RTCDS? RTCS or TDCS? or something like that for example help with depression that not be treated with counselling, I mean therapy. I don't know maybe using some neuroscience informed intervention that... helps relax IBS for example, which is a gut related anxiety […] I don't know." (FG2: 291-297)

It is worth noticing Dalia's tentativeness while introducing NIBS. She seemed to experience difficulty in finding her words and tried to make appropriate yet ambiguous links between the use of NIBS and other tools that directly treat the physical manifestation of psychological distress instead of exclusively talking about tools such as tDCS that alleviate the neuro-correlate expression of treatment-resistant distresses. Perhaps her sense of being on the opposing side of working subjectively within CoP has contributed to this confusion and consequently prevented her from expressing clearly her stance on NIBS.

In summary, participants who supported the integration of neuroscience into CoP provided a comprehensive explanation of the *why* and *how* aspects of the subject. They sometimes used arguments such as CoP values, social justice, and non-medical frameworks like the Power Threat Meaning Framework (Johnstone & Boyle, 2018) to support this wish for integration. However, even those who support integration may feel uneasy discussing topics like NIBS, which might suggest a premature topic to discuss at this stage of the CoP profession.

3.4.2 A Rejecting Attitude towards Integrating Neuroscience into CoP

This theme encapsulates several dimensions related to the rejection of integrating neuroscience into CoP, including the impossible co-existence of both fields, which suggests the non-readiness of CoP for integration in the here and now and the threatening aspect of integration, such as the reinforcement of the power unbalance in the therapy room. At times, a rejection carried less drastic aspects, such as the auto-sufficiency of CoP as a field that does not need any addition or improvement.

Harry expressed his objection to integration as he perceived it threatening and was concerned that neuroscience would replace the subjective stance, including the unique context that helped a psychological distress to develop, as seen by CoP. He seemed to stand on the opposite side of the spectrum and claimed that psychological distress is only cultural when he said:

> "For me I would consider most things cultural, not really biological. So I wouldn't really go into as much detail with oh this is your brain activity and it feels a bit impersonal to me. If someone came to me in therapy, someone was telling me about biology, I would be would, it's nothing to do with me. No, absolutely not." (FG1: 194-199)

One can appreciate Harry's use of categorical language to express a crystal-clear rejection of the very idea that psychological distress might have neuroscientific underpinning that would help the clients make sense of their experiences. It sounds as though the topic is triggering to the extent that Harry is taking an extreme position against any biological factors to psychological distress.

On another occasion, Harry took an offensive position in an interaction with Grace when the latter mentioned the importance of integrating neuroscience knowledge into CoP. Harry used a firm tone while asking Grace the following:

> "No, it's like why don't you think that it's enough for them to just believe in the process of the therapy? Why do we need this extra neuroscience? […] that means we're just saying that […] counselling psychology is not enough and we need something else" (FG1: 1410-1415)

Harry appeared to use a defensive tone while conveying his belief that CoP is sufficient and does not require integration of a potentially dangerous field like neuroscience. He also showed concern about how clients may perceive CPs who deviate from what he believes CPs should do. It seems as though he is projecting his fear of identity changes onto clients, which could explain his use of categorical language. He also highlighted how the integration would be forced and inorganic when he said:

> "[…] the integration [is] flawlessness, the neuroscience it doesn't go, I'm not considering pluralistic to include neuroscience. I say CBT […] Cause it fits naturally. It fits quite well. I think there's elements that you can integrate together. Neuroscience I don't think fits that nicely." (FG1: 874-880)

Harry seemed to claim that integrating neuroscience into CoP would be flawed and unnatural. The impossible co-existence that Harry highlighted above was also expressed by Imane FG3 when she compared integration to a sinful marriage:

> "You would never marry them [CoP and neuroscience]." (FG3: 203)
>
> "They just look like two divorced things." (FG3: 205)
>
> "They don't. Yeah, you wouldn't imagine. But then again you wouldn't imagine counselling and psychology together the two terms." (FG3: 207-209)

It seemed as though there is a mystic power that prohibits the marriage of neuroscience and CoP, which makes the concept unthinkable for Imane. However, the moment she expressed this view, she seems to retract and thought about the similar liaison that link counselling and psychology and created CoP, which might imply that CoP itself is illegitimate because it is the fruit of a sinful marriage.

In this sense, Isabella shed some light on the association between rejecting the integration and which side of the spectrum CPs and CPTs stand when it comes to their identity: purely humanist counsellors or scientist psychologists:

> "It [integration] would probably depend on how strongly you hold your counselling psychology values as well, I suppose. It depends on where you land on that spectrum of being a scientist-practitioner and being a […]" (FG2: 371-374) "Counsellor. […] Because if you hold your values really, really tightly, you might not want to integrate." (FG2: 376-378)

According to Imane and Isabella, the *sinful* marriage of psychology and counselling has created CPs and CPTs with very contrasting positions, which can be experienced in the three groups, making the topic of integration depending on which side the CPTs lean into. This view suggests that if CPTs are more psychologists, then they would lean towards

integration, whereas if they are holding their values *tightly* what Isabella calls being counsellors, then any form of integration is off the table.

On another note, other participants defined the rejection of the integration within a context. For instance, for Narjiss, the hypothetical integration of NIBS into CoP raises the issue of prescription, consent and alternatives when imagining having the NIBS discussion with her clients.

> […] you're going through this will help so that you can be part, engage in therapy but then what if they don't want to? Yeah, I'm just telling them this. Yeah, it's just doesn't sit right with me. To what end are we doing this? Because I know we work with, there's also work done with people who are going to go into surgery. I work in a dental service where I work with their anxieties because they have to have that dental surgery. But do they have to have this?" (FG1: 1211-1221)

Narjiss' rejection of neuroscience seemed partial and exclusive to the use of NIBS as *it doesn't sit right with* her, which seems to be raising a series of ethical and practical issues that need to be considered before such integration, including the potential of the power imbalance in the therapy room that might give extra power to CPs and CPTs to the detriment of the therapeutic relationship and the client's well-being.

In sum, the rejection of integration was mainly related to the perceived threat of neuroscience to CoP values, the possible pervasiveness of neuroscience in the case of integrating NIBS and how the CPTs stand on a spectrum or perhaps a dichotomised position imposing counselling to psychology.

3.4.3 Neuroscience is Already Here: Let's Name the Elephant in the Room!

When I first approached this research, I considered integration as a hypothetical aspect to explore with CPTs, I did not imagine that it does already exist in CoP work. Accordingly, this theme refers to the already existence of some aspects of neuroscience in CoP, including how it underlies the understanding and treatment of psychological distress. The theme was expressed in several forms, sometimes through an epiphany that I shared with my participants in real-time and other times as an obviousness that CPTs and CPs tried to shy away from.

When Juan from FG1 was asked to give a metaphor for how he pictures integration, he said:

> "[…] if all of us in the room are different kind of aspects of psychology, neuroscience is maybe hiding under the table. But it's there. But we know it's there, but we're not really calling it out." (FG1: 954-957)

Juan suggested that neuroscience is already a part of CoP, but some CPTs may have an issue with acknowledging it, perhaps due to the negative connotations that neuroscience may carry for some of them. At this particular moment, Juan's metaphor was a revelation for me. Even though I had composed my literature review and drawn links between psychological distress, such as trauma, theories like attachment and neuroscience, its existence in CoP was abstract to me. Juan's metaphor materialised the existence of neuroscience in CoP in my eyes. That said, I needed to bracket my 'aha' moment to continue moderating this group which was quite difficult.

Thomas from FG3 experienced a similar epiphany regarding the existence of neuroscience within CoP.

> "[…] And not just that, but I feel like and how much of it [neuroscience] I'm probably I'm already using without even acknowledging that I'm actually using components of neuroscience in the works that I'm already doing with clients. So I think it's really opened my eyes to how important it probably has been to the work that I do without really realising that it was important." (FG3: 957-963)

It appears that Thomas sounded proud of himself for being able to use neuroscience thus far, and the surprise of how much he is already using it with no need of taught material seemed to amuse him. This testimony suggests that the use of neuroscience knowledge is natural enough that it is not seen unless pointed out, which might render it taken for granted. This view is shared with Elon FG2, who expressed a similar epiphany when he said:

> "[…] the more I think about [neuroscience], it is already massively integrated. It exists. It's completely infused and entwined because the work that we do is completely informed by it. It's massively changed by it. If you say to somebody who's experiencing trauma: Hey let's do some mindfulness together. It's because there's lots of neuroscientific evidence to suggest how it changes the brain and how it affects the body." (FG2: 701-708)

Elon implied the imperceptible existence of neuroscience within CoP through the use of the adjectives *infused and entwined.* He went further to imply that neuroscience knowledge and research have changed and advanced the work of CPs in treating psychological distress, such as trauma. He suggested that neuroscience contributes to the

holistic approach to treating trauma through how biology and psychology are complementary to make sense of it. Juan, in FG1 echoed Elon's position when he used the adjective *rooted* to describe how neuroscience is present in CoP: "[…] our practice is more rooted in neuroscience than we maybe realise." (FG1: 104-105). Juan's statement implied that neuroscience might be one of the foundations of the CoP clinical work even though it is not named nor recognised.

On another occasion, Grace suggested that neuroscience underlie therapy modalities when she said:

> "[Susan Howard] wrote a book about psychodynamic and I saw one of her chapters, it's about neuroscience in psychodynamic and something like that. So I haven't read it yet, but that made me think how it made me become interested in this area." (FG1: 17-20)

Even though it sounded tentative, Grace's statement might imply that neuroscience is present in modalities that CPTs use already in therapy, such as psychodynamics, which can join previous assertions on how CPTs are already using neuroscience without naming it.

To summarise, participants highlighted the presence of neuroscience in various aspects. They described this presence as seamless, imperceptible and, at times, surprising. During the initial focus group, I also experienced an 'aha' moment when I realised the extent to which neuroscience was already present in CoP, given that I am a CPT who worked for two years with trauma and PTSD.

3.5 On Being a CPT and Identifying with CoP Ethos and Values

This overarching theme has two separate themes that revolve around the concepts of identity and neuroscience. Whilst the first theme highlighted CPTs' perception of CoP identity and how it becomes defensive to the extent that it might deviate from its foundations, the second theme highlights the identity issue amongst CPTs and how at times, it becomes a burden and a source of injustice in comparison to other professions such as clinical psychology. The first theme was contributed to by 13 participants and the second by nine.

3.5.1 CoP's Defensiveness Might Drift us Away from what it Stands for

This theme encompassed distinctive facets starting from the very definition of the CoP and what it stands for to how it can sound Othering and dismissive of useful and needed tools such as neuroscience. In one of Elon's FG2 previous excerpts, where he discussed the dichotomy that the CoP curriculum creates between neuroscience and CoP, he defined the latter as being about subjectivity as it "*concentrates […] in that human part*" (FG2: 256). While defining CoP, Dalia highlighted its evidenced-based nature even though it is not committed enough to the scientist-practitioner model as CPs do not update the research.

> "[…] we […] use evidence-based therapy. […] we don't update, I understood that we don't update our values based on the new research. […] We hold our values, our ethos of counselling psychology based on how it was." (FG2: 499-502)

Dalia implied that CoP does not update itself because of a lack of research produced by CPs for CPs, which might render CoP values outdated. This assertion was tested 'live' in

this group interaction when Isabella asked participants about their intentions to conduct research in the future.

Isabella:	"how many of us are realistically going to leave this doctorate and go and conduct loads of research and update the evidence base realistically?"
Elon:	"Not me."
Delphine:	"Not me."
Celine:	"Not me" (FG2: 461-467)

This domino effect and snowballing (Fern, 1983) of consensus about not intending to conduct research after graduation might reflect the essence of the fear about the CoP as a field and how a lack of research conducted by CPs might expose CoP to rigidity since the values might not be updated by research as Dalia suggested earlier. This point might also underlie a fear of disappearance. The latter might also relate to the fact that CoP programmes are closing in two of the universities where some participants of this group are training. Perhaps the fear of not existing or ceasing to exist has accompanied the whole discussion captured in this theme and the following one. I experienced this fear while conducting this focus group, especially when I stopped the recording and a participant insinuated that they might be the last cohort at their university. I felt threatened and wondered whether discussing the integration in the middle of these uncertain times was appropriate.

Apropos fears, and worries, Scarlet in FG3 highlighted the danger of worrying about CoP values and compared it to the medical model:

> […] it's interesting how the medical model is more about categories and putting labels and I think when we are also very worried about our own identity, we're doing the same thing. We are ignoring what the client needs and what benefits them, I guess." (FG3: 780-784)

Scarlet drew a similarity between CoP and the medical model in being reductionist and dismissive of contrasting yet helpful perspectives, such as integrating neuroscience into CoP. She also seemed to warn about the consequences of being against the client's well-being, which might deviate CoP from its essential role in delivering the best practice for the benefit of the client's unique interest. Interestingly enough, Narjiss in FG1 used similar wording to express the same comparison between CoP and the medical model if the first refuses the integration of neuroscience:

> "[…] if we don't have it [neuroscience] then we are doing exactly what the medical model is doing" (FG1: 705-706)

Narjiss and Scarlet's analogies to the medical model suggested a perceived rigidity and reductionism of CoP. It implied that CoP only approaches psychological distress from a psychosocial model ignoring then the biological part of it, which might leave CoP incomplete as it does not have *the whole story*. It also might imply the possible CoP blindness to its own flaws if it does not renew itself and question the perceived resistance to change.

However, Isabella FG2 seemed to see things differently. She perceived the identity of CoP as evolving compared to the past:

> "[…] So I may be able to assume someone that's done their counselling psychology training when it first came about, they maybe wouldn't want to integrate potentially? […]" (FG2: 389-392) "[…] I noticed […] talking to professionals that have been in counselling psychology for longer. […] there's more resistance towards it. But I think particularly many trainees in my cohort really go towards the evidence, which is a really good thing. […] there is just some kind of resistance from my perspective depending on when someone's completed their training […]." (FG2: 401-409)

Isabella drew a comparison between older CPs and younger generations of CPTs to convey her position about the evolving identity of CoP based on her personal experience of CoP training. She seemed to indicate that newer generations are less rigid and more open to integrating disparate fields such as neuroscience. However, at times she would retract and describe the population of CPs and CPTs, including herself, as *rigid thinkers*:

> "Yeah, it [identity] hasn't really evolved, unfortunately, in the sense […] we can be quite rigid thinkers" (FG2: 459)

Since Isabella is one of the participants who have expressed their positions against the integration, I wonder whether those contrasting views represent her confusion on a topic towards which she claimed to have little to no knowledge or whether the focus group and the interactions with other members pulled her to see multiple facets of an issue such as integrating neuroscience into CoP that might seem simple at first sight.

Dalia also expressed the evolving aspect of CoP:

> "[…] I think [the focus group] shows me an optimism […] we are future counselling psychologists, we are able to see how our field can evolve and we try to be a bit more open to change even for example, some of us could be bit more rigid (Laughter). We are more open to accept new changes, […] we are going somewhere." (FG2: 1028-1034).

Dalia seemed to describe a dynamic and evolving identity of CoP. She gave the example of the focus group to illustrate the *optimistic* attitude of CPTs on the future of CoP that indicates an evolving identity towards more openness and integration. However, towards the end and despite her expressed chauvinistic pro-integration position, she shared a concern about the future of CoP in the case of integrating neuroscience into CoP when she said:

> "[…] it's a little blur still [the imaged integration] cause there are many things that you can integrate, but when it stops being psychology, then it becomes purely neuroscience or becomes like medicine […] (laughter)." (FG2: 297-300)

Dalia seemed to question the future of CoP, if such an integration is about to be imagined, which might explain what came out as a peal of nervous laughter at the end of her reaction. This facet might indicate that even amongst the most enthusiastic trainees towards integration, there subsists a concern about the future of CoP and CPTs if the integration happens, which draws a link to the following theme on CPs' identity and how they identify, including their concerns, sense of self and comparison to other professionals.

3.5.2 Who are we? An Identity Crisis

This theme was developed as a result of a digression from the main topic of integration. Later on in the analysis process, it sounded to be intrinsically connected to the research question through how participants perceive themselves in relation to neuroscience integration, including the obstacles that they face, such as perceiving the course as not enabling them to integrate neuroscience academically and professionally. Participants also used the comparison to Clinical Psychologist Trainees (CLPTs) to illustrate their frustration with the double standards and injustice in the treatment they face in the outer world.

CPTs' identity for Grace from FG1 is mostly humanistic, which differentiates *us* from *them* within the NHS:

> "[…] you'll be working in a multidisciplinary team, you will […] [work with] various professionals who will have different epistemological stance to yours. […] those who are adopting let's say, biological approach and us counselling psychologists who are or believe in the humanistic values and try to actually build the bridge between us and them. I'm using us and them." (FG1: 291-299)

Grace claimed CoP humanistic identity and highlighted how neuroscience, if integrated can bridge the gap between the humanist values of CoP and the biological stance of other professions for the benefit of clients in MDT, which implicitly refers to the identity of CPs as advocates for their client's well-being within the NHS. Accordingly, Grace viewed CPTs and CPs as advocates whose identity is rooted in humanistic values. She also used a metaphor to illustrate this view:

> "[…] we have to be flexible and focus on that big trunk. Is it trunk on the tree? Yeah, that's the humanistic, that's the human. I'm dealing with the human here, right?" (FG1: 800-803)

Accordingly, Grace considered CP identity as a huge tree with a trunk being the humanistic approach, and the branches are the integrated part of distinctive disciplines, including neuroscience which suggested a pluralistic, integrative and holistic approach that might empower CPs and strengthen their sense of identity.

However, the topic of identity raised some insecurities about being a CPT and a future CP among other participants. Delphine expressed how CPs are not a big population and how some of their choices will contribute to the probable disappearance of the whole profession in response to the issue that CPs do not conduct research:

> "[…] There's so many clinical or whatever the other ones are. But there's just so we barely exist […]" (FG2: 509-511) "But see, that's the problem with counselling is that the fact that they've just become so insecure about their profession that they're trying to hold onto it." (FG2: 514-516)

Delphine seems to imply that CPs coping mechanisms with the insecurity of being a small population might perhaps contribute to their extinction. The assertion raised a series of interactions and confrontations between CPTs who agreed with Delphine and others who refuted the insecurity.

Elon: "Who's insecure about their profession? (laughter)"

Delphine: "The counselling psychologists. Yeah."

Elon: “=I wouldn't say yeah”

Delphine: “=You aren't. I am a lot. I”

Dalia: “=I am”

Celine: [I'm not]

Angel: “=I am.”

Isabella: “Definitely, I am insecure about my identity” (FG2: 517-524)

This interaction, characterised by snowballing and spontaneity (Fern, 1983), including Elon’s humoristic tone, might indicate the uncertainty that CPTs have around their identity and how this identity might be a source of confusion. This confusion might be related to the perceived injustice in treatment between CPTs and CLPTs, who, according to Dalia and other participants, are more equipped to acquire neuroscience knowledge and integrate it into their profession.

> "But what it bothers me on the […] contrary is that although we [counselling] psychologists in general we are evolving towards neuroscience and done new techniques, et cetera. The clinical psychology for example, they have way more neuroscience than us and we're supposed both of us to be practitioner psychologist. […] I think that people in clinical [are] […] more equipped to work in, I would say secondary […] or thirdly care that it requires some understanding of the way that brain works for example, or when it works in addictions and psychosexual services […] clinical psychologists, they were more equipped to understand and they were more familiar to that rather than us for example, like trainee counselling psychologists. So I think that part for me personally misses from the counselling doctorate and as you said, the neuropsychology degree for clinical psychologists you can enter directly. For us, you need to make a statement really and then say like, yeah, I've been taught that [be]cause we don't have […] all the requirements that they have. So that's annoying." (FG2: 171-193)

Dalia captured what other participants expressed in terms of injustice felt towards how CPTs are treated in both the professional and the academic systems. She gave the example of a taught program that does not empower CPTs to pursue more neuroscientific-related careers within applied psychology, such as neuropsychology. She also highlighted the privilege that CLPTs have within the system that gives them unjustified advantages compared to CPTs. She also expressed her frustration and annoyance towards this status quo. According to Dalia, the identity of being CPTs does not seem to stand by itself it is related to a context and, in comparison, to other professionals who are perceived as better or fitter. This insecurity might also relate to the CoP's closing programmes highlighted earlier, which might

have contributed to the expressed insecurity and unfairness that CPTs go through throughout their training and perhaps after graduation.

To summarise, the topic of integration has raised an issue towards the current and future identity of being CPTs and future CPs in an evolving world where calling 'ourselves' counselling psychologists might not be an option.

3.6 Chapter Summary

This chapter presented a report on the analysis of data, covering the three overarching themes and providing detailed analysis and interpretation of seven out of nine themes. The report was pragmatic and focused, presenting only the most relevant findings. The next section will discuss these findings in greater detail.

CHAPTER 4: DISCUSSION

4.1 Overview

This chapter discusses the findings in relation to the research question, explores the implications for CoP and brings the research adventure to an organic ending. A critical evaluation of the research will follow, including limitations. Subsequently, directions for further research are suggested before ending with a reflexive account of the present study.

4.2 Findings and the Research Question: Between the Literature and the Context

This study aimed to answer the research question on CPTs' attitudes towards integrating neuroscience into CoP. Three overarching themes and nine themes were developed. Accordingly, the current section contextualises the findings, including regarding existing research.

4.2.1 Attitudes on Neuroscience

The researcher phrased two focus group questions that helped develop this master theme. The first question, 'What comes to your mind when you hear the word 'neuroscience'?' was broad and aimed to give the participants the freedom to answer without directiveness. The second question, 'How would you describe your knowledge of neuroscience?' even though explorative, sounded more direct since it assumed that participants possessed neuroscience knowledge. Accordingly, three themes were developed, and two of them are presented here (see Figure 1 for the final map of themes).

Do we "Really […] Really" Know what Neuroscience is? Between Uncertainty and a Lack of Knowledge. This theme captured the confusion of the participants about neuroscience which was intrinsically related to their knowledge and perception of the field. Most of the participants perceived their knowledge as incomplete or not good enough. Also, some feelings, such as guilt, were interpreted and emerged while describing neuroscience. Other participants discussed the serendipity of neuroscience knowledge and demonstrated confusion between neuroscience and neuropsychology. This finding was consistent with Luke et al.'s study (2020) that explored counsellors' perception of integrating neuroscience into their field from an ethical perspective. The subtheme 'competence' highlighted the participant's concerns about their lack of knowledge of neuroscience and stressed how not being informed on the field might hinder their scope of competence if such integration occurs (Luke et al., 2020). However, the theme in this research captured the uncertainty around neuroscience that was not captured in previous research (Goss, 2016b; Goss & Parnell, 2017; Luke et al., 2020) since researchers might have used questions that dove directly into the definition of neuroscience instead of tentatively exploring the very meaning of the word. Accordingly, the concern and the fear expressed by some participants bridged the link to the following theme.

Neuroscience *: a Persona non Grata*. This theme highlighted the non-acceptance that neuroscience as a field might face in CoP. It appears that neuroscience suffers from assimilation and attribution to the medical model. Participants expressed their fear and concerns towards neuroscience as a dangerous field. They used the word neuroscience interchangeably with pharmacology and the medical model, which gave the former a reductionist and unwanted nature. Other participants stressed the probable existence of an institutional rejection and a separation *agenda* to the detriment of holistic knowledge of the

human being from a psychological perspective. This separation might intensify the fear of the Other when we do not know or are not informed about it. I borrowed the word Othering from social justice and feminist research to highlight a similar phenomenon I noticed while developing this theme (De Beauvoir, 1949a, 1949b, 2007; Scarth, 2004). Tuana (2006) emphasised the link between not knowing and the process of Othering through the notion of epistemic *ignorance*. Accordingly, it is my belief that the marginalisation of neuroscience may stem from a lack of understanding, particularly when specific tools like NIBS are compared to ECT or when people make assumptions about unethical behaviour by doctors in white lab coats resembling *Frankenstein*. This misunderstanding might be reinforced by educational and professional systems that exacerbate the separation between CoP and neuroscience, which might contribute to the creation of more gaps between the two fields.

Furthermore, this theme was consistent with Goss' (2016b) findings. Through his theme, 'the danger of Neuroscience', he identified the concerns and fears of some of his participants towards neuroscience. Whilst some of them identified it as dangerous in the therapy room as it might affect the agency of clients, some other participants criticised its reductionism. A similar inference was drawn from Luke et al.' (2020) study, where counsellors expressed their rejection of the scientific aspect of neuroscience that might contribute to the overreliance on objective measures and undervalue the subjective and unique experience of the clients. They also extend their refusal of neuroscience to the fear that neuroscience will open the door to reductionist treatments such as psychopharmacology within counselling (Luke et al., 2020).

Additionally, this theme was consistent with my personal experience as a CPT who comes from a scientific background, worked with neuroscience and often discussed it with colleagues and professors. Most of my colleagues and a large population of CoP professors

confused ECT with NIBS when asked about what neuroscience means to them. I was often surprised by what I perceived as a lack of knowledge and enthusiasm to know more when I introduced to them notions such as affective neuroscience and how it helps alleviate what it is called treatment-resistant psychological distress. Therefore, while developing this theme, I might have not fully bracketed my personal own subjective view on the matter and rather colluded with attitudes that confirmed my perception of the unwelcome and unacceptable status of neuroscience within CoP. However, my experience and the application of this theme in similar contexts, such as with trainees and qualified counsellors and counselling psychologists, suggest a possible transferability (Ritchie et al., 2013). Transferability is the equivalent of external validity in quantitative research, where the findings might be replicable in different contexts (Guba & Lincoln, 1989). Even though the burden of transferability lies on the shoulder of the reader (Ritchie et al., 2013), my experience of the data suggests that these findings are already applicable in two distinctive settings. However, due to the small sample size, it is not possible to make comprehensive conclusions about all CPTs or CPs.

4.2.2 Integration between the Good, the Bad, the Ugly and the Existing

This overarching theme encapsulated the contrasting attitudes of CPTs on integration. Whilst most participants expressed enthusiasm and openness towards integration, others categorically refused the integration of neuroscience or some of its *controversial* aspects, such as NIBS. Furthermore, the theme captured what participants called the already existing aspects of neuroscience in their work as therapists.

A Positive Attitude towards Integration. This finding was consistent with previous literature and highlighted the openness of most participants towards integrating neuroscience into CoP. The enthusiasm towards the integration was expressed through several arguments.

For instance, participants highlighted the importance of working holistically within a biopsychosocial model through research, in clinical practice or within MDTs. This finding was aligned with Goss's (2016a) systematic review of integrating neuroscience into CoP. The author mentioned the value that neuroscience can add to CoP in the therapy room by informing the biological basis of psychological distress, using neuroscience research within the scientist-practitioner model, and the suggestion for integrating neuroscience into CoP through the biopsychosocial model. The review also added how neuroscience integration could bridge the gap between CPs and practitioners who adopt more objective stances within MDTs, which suggests a work from a pragmatic perspective. This position was consistent with the findings where participants emphasised the importance of prioritising the well-being of clients in any decision made by CPTs. In other words, this integration should ensure that clients' needs are at the centre of the debate. The pragmatic approach to the CoP profession was also defined as a subtheme in previous research where participants highlighted the importance of prioritising the beneficial integration of neuroscience, even though this might not be aligned with some CPs' perspectives on CoP (Goss & Parnell, 2017). This theme is also consistent with other theorists' stance on CoP. Rizq (2007) suggested putting aside the conflictual dualism of philosophies and adopting a pragmatic perspective in which the understandings of the objective and subjective experiences are complementary and equally important for the benefit of the clients. Additionally, the participants' vision of a holistic perspective within CoP, where neuroscience can be a tool, is shared by neuroscientists who believe that human experiences are rooted in their holistic, subjective and embodied mind while they also result from the brain's activities that respond subjectively to external and internal events through neuroplasticity and epigenetics (Andreasen, 2004; Szyf et al., 2008).

Another facet of this theme was the empowering aspect of the integration. Participants' views on the empowering aspect of neuroscience for clients were consistent with previous research where participants highlighted how neuroscience could empower clients by strengthening the therapeutic relationship (Goss & Parnell, 2017). However, I have not found in the literature the empowerment that neuroscience can provide to CPs. Nonetheless, the empowerment expressed by the participants suggests a one-by-proxy. In other words, participants seemed to imply that integrating neuroscience into CoP might empower CPTs and CPs to leverage the power that other professionals might hold, which can empower clients and is consistent with CPTs and CPs' roles as scientist-practitioners-advocates (Fassinger & O'Brien, 2000; Mallinckrodt et al., 2014). On another note, Goss's (2016b) work implied that integration could be disempowering for CPs if they lack the necessary knowledge and when their clients have more knowledge in neuroscience than themselves. This statement is consistent with what participants expressed about how not having neuroscience knowledge can be a handicap to CPTs in the presence of neuroscience-knowledgeable clients.

A Rejecting Attitude towards Integrating Neuroscience into CoP. The theme developed was consistent with the literature. Participants highlighted how neuroscience, if integrated, can create several issues, such as power imbalance in the therapy room, its threat to both the subjective stance that CoP has on psychological distress and the identity of CoP, which makes the co-existence of the two fields impossible. The impossible co-existence of neuroscience as a third-person perspective and CoP as a first-person profession was identified in research about integrating neuroscience into counselling because of the non-alignment between neuroscience and counselling identity and the danger to the therapeutic alliance

since using neuroscience complex jargon in the therapy room might create a power imbalance (Luke et al., 2020).

Accordingly, the two previous themes highlight the ongoing debate on integration and whether this will empower or disempower clients and CoP (Fuchs, 2004; Rizq 2007). Some theorists encourage the potential integration through a relational and pragmatic framework (Fairfax, 2007). Others oppose and warn about the issues that could emerge because of the gap between the perspectives of third-person and first-person fields (Fuchs, 2004), including the abandonment of a subjective stance to the benefit of a robotic stance stripped from the humanistic values of CoP. This question was also considered philosophically. Neuroscience is believed to be essentialist and reduces the human experience to brain functions (Schultz, 2018). However, examples from first-person fields evidence the possible co-existence between neuroscience and phenomenology and gave birth to neurophenomenology (Varela, 1996). Equally, counsellors and counselling psychologists believe that co-existence can happen through a wellness model (Bedi et al., 2011; Luke et al., 2020). The wellness model applied to health is a comprehensive concept that includes the connections and interactions between physical, mental, social, emotional, and spiritual aspects (Klepac, 1996). This is consistent with the suggestion and wishes of participants in this research for a more holistic framework within CoP that encompasses a spectrum of branches, including neuroscience, spirituality and nutrition. However, the question asked by some participants and remains unanswered is whether we are not asking too much from CoP and expect it to be "*Jack of all trades*" (FG1: 405; 723) even though it appears as a field that is barely fighting for its existence in the current circumstances where the very identity of being CPs or CPTs might be threatened by the closure of some of the training courses.

Neuroscience is Already Here: *Let's Name the Elephant in the Room*! My story with this theme is tinted by my unconscious choice of not fully engaging with the literature. Whilst conducting my literature review three years ago, I came across Goss' (2016) thesis. However, I tried not to be influenced by his research processes, including the interview schedule and the analysis, by perhaps unconsciously omitting the information that I read. Interestingly enough, our analysis overlapped, including that neuroscience within CoP already existed. Accordingly, I wondered whether the '*aha*' moment I experienced during my first focus group and was shared with some of the participants in the two other groups was a fruit of my mind that had intentionally omitted the existence of neuroscience in our work for the benefit of an engagement with the data from a 'blank slate' perspective. I wonder whether the desire for bracketing and epoché had an effect on my cognitive ability to the extent that I had *forgotten* about the existence of neuroscience within my work as a CPTs and in the literature.

Furthermore, participants highlighted the existence of neuroscience in their work, including while making sense of psychological distress such as trauma and other psychological concepts such as attachment. These findings are consistent with previous research on the importance of neuroscience in couple and perinatal therapies (Cammisuli & Castelnuovo, 2023a). Also, neuroscience underlies models and interventions for treating trauma and PTSD (Ehlers & Clark, 2000). Participants who worked with trauma were able to pinpoint behavioural interventions such as grounding techniques and mindful breathing that directly target the nervous system and help ground the client in the here and now and prevent dissociation (Van der Kolk, 2006). These examples indicate that the presence of neuroscience is inevitable in our work as CPTs and future CPs, even though, at times, it is hard to name it because of either non-acceptance or concerns associated with our perception of CoP identity

and its fragility. Now that neuroscience, according to the participants, exists in CoP, would it not be important to give this existence more of a legitimate status and cease this *sinful* love affair between CoP and neuroscience to the benefit of a structured and boundary-limited relationship? Suggestions for policies and further research are made in subsequent sections.

4.2.3 On Being a CPT and Identifying with CoP Ethos and Values

This theme appeared to be the most challenging for me during the phases of data collection and analysis. Interactions with participants often drew me to my identity as a CPT and future CP (and not as an objective moderator or researcher), and many of them echoed my concerns about the future of the profession that was questioned as a result of debating the integration of neuroscience into CoP.

CoP's Defensiveness Might Drift Us away from what it Stands for. The debate around CoP's identity is not new nor exclusive to the topic of integration. CoP present and future identity was long debated between researchers and theorists whenever the topic of integrating contrasting fields is discussed (Goss, 2016a; Agresti, 1992; Ryan et al., 1999). While previous research (Goss & Parnell, 2017) marked the tentativeness and inquisitive nuance of CoP identity and values and how glimpses of defensiveness might be present, participants in this research seem to affirm a CoP defensive identity that seems threatened by anything contrasting its values. Participants brought up a new factor related to a generational gap between the old generation of CPs, who, according to participants, seem *clingier* to the identity and the humanistic side of CoP, whereas the new generation of CPs and CPTs seem more open to the integration. This finding might raise a question about the topic of integration in the context of the psychological developmental stages of CPs and CPTs. Blair (2016) contradicted this finding since they advanced that CPTs and CPs newbies might be at

the ‘identity versus confusion’ Ericksonian stage (Widick et al., 1978) – applied to this context, it can correspond to a search for a sense of professional self and identity, through an intense exploration of CoP related values, beliefs, and goals - This statement supposes that the newer generation would be *clingier* to their identity compared to CPs who have extensive experience. Accordingly, further research needs to be conducted to explore this discrepancy between the current finding and literature and understand whether age and generations of CPTs account for the decision to integrate neuroscience into CoP through quantitative research.

However, this finding was consistent with my perception of the three focus groups. Out of sixteen participants, only Harry and Isabella stated their firm opposition to the integration. I understand how the sample size is very small to draw such a conclusion, nonetheless, only a minority of participants seemed fearful and concerned about the identity issue if the integration were to occur.

Furthermore, participants highlighted how CoP are drifting away from the scientist-practitioner model in terms of conducting research. This finding is consistent with Jones and Mehr's (2007) position when they proposed that psychologists who adhere to the scientist-practitioner model should integrate their roles as clinician and researcher by engaging in research to inform their practice. However, a paradoxical dynamic happened when the same participants who complained about CPs not conducting enough research were the same to deny any interest in conducting research in the future. I failed to find literature that supports this theme. However, similar points were noticed by Goss (2016b) when he identified a subtheme, ‘Too much counselling, not enough psychology’. It appears that this theme incorporates the participants’ understanding of the CoP identity that might be linked to a spectrum of interpretations, making a topic such as integrating neuroscience into CoP depend

on these interpretations. For instance, previous research found that CoP might rely more on counselling than on psychology (Goss, 2016b). This view was expressed by Isabella, who said that the stance on integration depends on where CPTs fall on the spectrum of CoP: if they align more with the counselling values, they will reject integration, but if they lean towards the psychological scientist side, they may be more interested in integrating neuroscience.

Another new facet this theme brought was the analogy some participants made with the medical model. Participants seem to perceive CoP and the medical model as similar in terms of rigidity. Participants seem to express that CoP focuses solely on the subjective experience, including social and psychological contexts while disregarding the biological aspect that can aid in understanding psychological concepts such as attachment and trauma. I failed to find supporting literature on this facet except for Moller's (2011) position on British CoP, which she described as rigidly identifying with phenomenology and humanistic values. Perhaps, the absence of literature indicates the novelty that this research brings to the topic of integration concerning CoP perceived rigidity and defensiveness.

Who are we? An Identity Crisis. The topic of integration triggered the theme around CPTs' identity and how neuroscience's absence from the curriculum is considered as against CPTs' interest compared to other trainee practitioners. This theme captured how some participants referred to the scientist-practitioner-advocate model as an identity that is rooted within the CoP humanistic values and how integration can bridge the gap between this humanistic identity and other contrasting identities present in MDTs. I have not come across literature that uses the model as an identity except for Shullman's (2017) essay on leadership and CoP, where she discusses the importance of CPs identity as scientist-practitioners-advocate-leaders in times of dilemmas, ambiguities and possibilities. Accordingly, if we

apply Shullman's (2017) stance on the topic of integration in relation to participants' attitudes, integrating neuroscience into CoP becomes a possibility that can strengthen the identity of CPTs and CPs as advocates and leaders. This can be achieved through the development of new interventions by CPTs and CPs, as well as their active involvement in shaping healthcare policies through the use of neuroscience knowledge. This approach can also help bridge communication gaps with other professionals.

However, the identity debate might have triggered some participants' insecurity about their future as CPs in relation to contextual difficulties and in comparison to other professions, such as clinical psychology. Participants contextualised their identity and expressed frustration and disappointment towards what seems to be the unfairness and injustice they experienced in academia, research and placements compared to CPLTs. Indeed, except for Goss and Parnell's (2017) study based on Goss' (2016b) thesis, I could not find any studies that explore exclusively neuroscience topics within CoP, whereas the literature about neuroscience and clinical psychology is extensive (Bouchard & Rizzo, 2019; Ilardi & Feldman, 2001; Ray & Grodin, 2021; Riva et al., 1998). Moreover, the clinical psychology professional doctorate curriculum in both the University College of London and Newcastle University encompasses fundamental material on neuropsychology and neuropsychological tools and 'disorders' (NCL, 2023; UCL, 2019). The curriculum in both universities suggests that clinical psychology trainees have access to extensive knowledge of neuroscience compared to CPTs, who appear to have little to none, according to the participants.

Furthermore, participants from two Greater London universities expressed their concerns about CoP closing programmes. Indeed, in the last few years, CoP programmes have closed or on hold in several universities in Greater London (Cahill, personal communication, n.d.). The BPS have expressed their concerns about these closures and

suspension and tried to understand this trend through the organisation of workshops and debate with the programme leaders and universities (BPS, n.d.). This context might exacerbate this fear and insecurity about the identity of CPTs and CPs regarding integration. This finding was consistent with previous literature where CPs expressed their fear of losing their identity when integrating neuroscience into CoP (Goss & Parnell, 2017).

To summarise, the study has shed some light on the similarity of the present findings with previous research regarding attitudes, including concerns, enthusiasm, openness and fear that CPs, CPTs and their first cousins, trainees and qualified counsellors expressed towards integrating neuroscience into their respective fields. However, this research highlighted more openness than apprehension, even though this openness was sometimes partial. The partiality was highlighted in the discussion of NIBS, which still seems to be *a persona non grata*. The study also helped gain insight into how the integration is imagined and how it might be viable within a perceived threatened and defensive CoP. Implications are discussed in the subsequent section.

4.3 Implications For Counselling Psychology and Future Research

As previously stated, it might be hard to draw conclusive implications with such a small sample size. However, a few novel findings might help draw implications of this study for CoP.

This study has evidenced the interest, openness and enthusiasm amongst most of the participants. Even though it came with carefulness and tentativeness, an expression of interest towards neuroscience implied a readiness of CPTs to explore neuroscience on multiple levels, including in their taught programmes, research and placements. These suggestions of the

multiple means of integration were expressed by participants. Additionally, the epiphany the researcher shared with some participants about the *already* existence of neuroscience implies a strong presence of neuroscience within CoP. Also, these findings were supported by some research literature despite the novelty of the topic.

4.3.1 Education

One implication for CoP can be the addition of neuroscience knowledge to the CoP curriculum. The creation of a neuroscience module within the taught programme can give CPTs a scaffolding for how to use neuroscience in their clinical practice in addition to facilitating access to trustworthy resources (Goss, 2016b). However, given the CoP values and underpinning philosophy, this integration should be well thought out and discussed at length to overcome challenges and issues that might arise, such as finding a 'good enough' balance between first and third-person aspects within a holistic pragmatic and pluralist CoP future. A suggestion is to submit a syllabus to the division of counselling psychology within the BPS and actively discuss it with programme leaders across the UK. If a consensus is obtained, the syllabus can be unified in all the universities of the UK. Once done, future CPTs might have more skills to apply for future neuroscience-related training, such as clinical neuropsychology and work in neuroscience-related placements and practices. Moreover, this suggestion is consistent with standards of proficiency requirements for CPs as highlighted by Goss (2016a) when the HCPC added in 2015 a new requirement that stresses the importance for CPs to "understand psychological models related to a range of presentations including [...] problems with biological or neuropsychological aspects" (HCPC, 2015, p. 15).

Integrating neuroscience into CoP might also resolve the financial and recruitment issues that some CoP programmes face. Even though the researcher did not access literature that evidences the financial and staffing issues CoP programmes face, discussions around this topic were shared with the researcher's professors and programme leaders of some universities. A suggestion would be to dedicate an entire module to neuroscience, allowing the programme to recruit neuroscientists to deliver such a module and consequently lower the need for new counselling psychologist lecturers in an academic year. It can also ensure a transferability of skills within a university, creating more exposure of neuroscientists to CoP, which might help the dissemination of CoP values and identity in objectivist fields and ensure a bilateral pragmatic influence where both worlds can benefit from the best of each (Goss, 2015).

4.3.2 Clinical Practice

The previous implication might be inherently related to how neuroscience can be included in clinical practice. Participants expressed their frustration for not having equal access to placements that might encourage the use of neuroscience, such as neuropsychological settings, compared to trainee clinical psychologists. Research demonstrated that access to placements is correlated to the CoP curriculum (Ramsey-Wade, 2014). In a study on the type of placements CPTs have the most access to, neuropsychology placements combined with health psychology and pain management settings accounted for only 5.6% of the placement contacts for the five CoP participant programmes (Ramsey-Wade, 2014). Accordingly, a taught module might enhance CPTs' accessibility to neuroscience and neuropsychology placements and can widen their chances of pursuing careers in clinical neuropsychology should they choose this pathway.

4.3.3 Research

This study identified gaps in the literature regarding the integration topic within CPTs and CPs. Given the novelty of the topic, there is a scarcity in this field of research. Only two relevant studies were conducted to explore the topic of integration—one of them for counsellors and the other one for CPs (Goss, 2016b; Luke et al., 2020). The researcher agreed with previous research in their suggestion of further quantitative research to enhance the horizontal validity of this study's findings. As Goss (2016b) suggested, the themes of this study, combined to his themes, might give birth to a questionnaire or give further guidance to device a survey across the UK before starting the implementation of the suggestions made earlier.

Other suggestions might be targeting specific areas of integration, such as NIBS. Participants showed ambivalence towards the possibility of using NIBS within their practice. Perhaps exploring this integration from the client's perspective might help CPTs and future CPs decide on the use of what seems to be a controversial tool. Accordingly, understanding the client's experience of being *capped* (having a cap on their head) or *wired* and how this might influence their views on constructs such as free will, identity and justice should be explored. Consequently, the researcher suggests a mixed-method study that first captures the experience of past participants or individuals who had NIBS treatment only or in conjunction with other psychotherapies. Second, the design of a questionnaire that assesses the readiness and acceptance of counselling psychologists towards the integration of NIBS into CoP. A similar questionnaire was designed recently to assess the acceptability of tDCS in participants who experience major depression (Rimmer et al., 2022).

4.4 Quality and Limitations

As introduced in the third chapter, the assessment of quality is a key tool for evaluating the worth of qualitative research (Willig, 2013). In this section, the researcher evaluates the quality of the research while contextualising the respect of the criteria within the philosophical pragmatic framework.

4.4.1 Sensitivity to Context

The philosophical approach and epistemology were clearly stated in addition to the methodology and method choice. As Willig (2013) stated, the assessment of qualitative research should include positionality, which helps understand the underpinning research paradigm. The researcher stated their positionality through the rationale of a pragmatic philosophy that allowed them to adapt their epistemology and ontology to answer the research question. Accordingly, the researcher gave a rationale for choosing the critical realist paradigm. Moreover, the research topic was informed by the researcher's background and interest in neuroscience, in addition to discussions with fellow trainees and qualified counselling psychologists about the topic of integration.

4.4.2 Commitment and Rigour.

The criterion was respected through the previous knowledge and career of the researcher in neuroscience in addition to their immersion in data. The researcher has read extensive literature and used neuroscience in their Bachelor's final year project and during her former career as a software engineer. Additionally, she worked in MDTs and have had a keen interest in neuroscience. Also, the identity of the researcher, as CPT, helped the commitment

to a prolonged engagement with the topic (Yardley, 2000). Moreover, the researcher evidenced a 'good enough' data immersion and showed clear processes through her methodological skills. Also, the purposeful sampling captured and represented the pluralistic underpin of CoP as participants were from various philosophical backgrounds (see Table 1). Therefore, the sample was adequate for qualitative analysis, especially if the data is to be carried further to help the generation of a vertical or horizontal generalisation as intended by the researcher (Yardley, 2000).

Furthermore, a saturation of data as "the most frequently touted guarantee of qualitative rigour" (Morse, 2015, p. 587) was used to estimate the sample size. Qualitative research requires a smaller sample size than quantitative research (Willig, 2013). However, a sample size should not be chosen randomly. Hence, the use of data saturation to estimate the 'good enough' number of focus groups that could answer the research question. Saturation occurs when the collected information becomes repetitive, and no further data collection is required (Hennink et al., 2019). The literature suggests that three focus groups are enough to capture 80% of the prevalent themes and three to six with 90% of themes in homogenous populations (Guest et al., 2006); hence, the choice of conducting three focus groups for this research with a maximum of eight participants for each. Moreover, peer support and research supervision helped to ensure rigour.

4.4.3 Transparency and Coherence.

The researcher aimed for a transparent process emphasising coherence regarding the conciliation of the research questions, the employed method and the chosen approach (Yardley, 2000). The author aimed to provide suitable illustrations through quotes and an understandable reflexive process throughout the thesis and outlined the deductive and inductive analysis by

identifying latent and explicit overarching themes and individual themes (Clarke & Braun, 2021). Accordingly, the aim was to find a balance in combining an empathetic description and Ricoeur's (1970) suspicious questioning of the data by using a proper amount of interpretation and relevant theories to the topic to reach the latent meaning of the dataset.

4.4.4 Impact and Importance.

The research has attempted to fulfil the requirements for this criterion by stating implications for practitioners with novel and challenging perspectives. The author has clearly articulated the impact and the importance of the paper to CoP by evidencing how it is the first empirical study that explores the construct of integration from CPTs' perspectives. Moreover, findings shed some light on some practical implications, such as the potential integration of neuroscience in the doctoral training programmes for CPTs and how these expositions to the field of neuroscience might help them acquire informed views, and the influence that CoP can exercise on neuroscience (Goss, 2016b).

4.4.5 Limitations

An undeniable limitation of this study is my pro-neuroscience position which was omnipresent throughout the process despite my attempt to bracket my attitudes towards the topic of integration. Accordingly, I used a research journal throughout the process, which helped me, to an extent, be aware of my partiality towards the research topic. However, bracketing does not address the bias towards a position, as grey and blind areas might influence the course of research. It is worth noting that being aware of something differs from changing or controlling it. As a researcher with a pro-neuroscience perspective, I am aware

that my attention may have been directed towards certain data patterns that may not have been noticed by someone with different views.

Furthermore, the pro-integration position might have influenced the course of research before the data collection. During my revision of the appendices of the research after the first submission of my thesis an expression in my research's advert around the rationale to participating to the research attracted my attention, it says "[…] It will help understand the trainees' positions, if any, on the thought, feasibility and possibility of this integration. Consequently, it could help promote a change and perhaps suggest policies." This sentence might have been directive and also might have attracted only a specific type of participants since the recruitment and the data collection were not clearly based on the level of interest of participants on neuroscience or in integration. Moreover, this limitation might have partially compromised the sensitivity to context criteria, the sample selection and the findings. I might have also been at times lenient with the omnipresent pro-integration attitudes of participants who might have benefited from voicing their opinions more than participants who objected to the topic of integration. The latter issue might also relate to my novice role as a moderator using focus groups as a data collection method for the first time.

Another limitation was my novelty to moderation. A moderator should have 'good enough' expertise and experience to avoid limitations such as being impartial (Puchta & Potter, 2004). My novelty and anxiety around conducting focus groups for the first time drew me to make errors that might have influenced the quality of the research. For instance, I discussed previously how Imane seemed intimidated by the domination of the pro-integration process. I might have contributed to this intimidation through my choice of a mug. Before each group, I would go to the kitchen near the focus group room to fetch cutleries and glasses and serve refreshers to participants. I could not find the plastic-free cups I left in the morning.

I had to go downstairs to find mugs from the baby lab, where I used to spend time while conducting my cognitive neuroscience research for my undergraduate final project. I had a choice between multiple mugs, but I chose the one with a capped smiling baby for some reason. I reflected on this choice and whether it was an unconscious decision to influence Imane's position on the topic. Perhaps it was so; research has evidenced the powerful impact of smiling babies on influencing people's decisions through an affective appeal (Anderson & Saxton, 2016). Accordingly, this choice of mug might have compromised the neutrality I aimed to achieve while moderating this group since seeking neutrality is one of the pillar conditions to successfully conduct focus groups (Puchta & Potter, 2004).

4.5 Ending Reflexively

I tried my best to be and remain aware of my internal processes and behaviours during the challenging yet inspiring adventure of embarking on qualitative research (Willig, 2013). Reflexivity as a recommended tool to ensure transparency (Yardley, 2000) was one of the helpful and sometimes daunting processes that I used to cope with uncertainty and other topics, such as becoming a 'positivist creep' (Braun & Clarke, 2022). The expression describes what I faced multiple times, mainly during the analysis process. My positivist background drew me to perform the coding *ad nauseam* in a search for the ultimate truth. Luckily the support of my supervisor was important. Braun and Clarke (2022) suggested that a supervisor with extensive experience in qualitative research can be a shifting factor in the life of a newbie researcher. Accordingly, my supervisor's extensive experience helped with topics such as my concerns about 'premature closure of analysis' when they reminded me of my philosophical stance to help me make pragmatic decisions like moving on to other stages of analysis even though this was painful or choose a partial reporting of my findings to fit the word count. Therefore, some themes, such as orphan themes (see Appendices P, Q and R for

the early stages of theme mapping) that did not seem to answer the research question, were abandoned. Some other themes encapsulated in the first two master themes, namely 'Neuroscience has a lot to offer' and 'What is needed before the integration?' were not reported due to the limited word count. Consequently, a pragmatic choice of focusing on the most relevant reporting for the research aim and in relation to the research question was adopted.

Reflexivity helped me notice some limitations such as the selection of a limited literature review. It is important to acknowledge the extensive literature that connects neuroscience to various mental health professions such as psychology, psychotherapy and psychiatry (Bordes et al., 2023; Kyzar & Denfield, 2023; Lee, 2013; Pierce & Black, 2023). Therefore, in order to maintain a pragmatic approach to my project, I had to narrow down my focus to the most pertinent arguments. Despite my personal interest in neuroscience, I made sure to include different perspectives and opinions to present a balanced argument. However, achieving the level of *epoché* and bracketing (Husserl, n.d.; Tuffour, 2017) that I aspired for was challenging, if not impossible.

Reflexivity also helped make sense of methodological choices and their impacts. After the pandemic, conducting face-to-face focus groups for research was an overwhelming process in the online and hybrid post-pandemic world (Hopkins & Bardoel, 2023; Zhu et al., 2023). It was time and energy-consuming to gather 16 participants and find suitable times for them to meet for the research. Even though my pragmatic philosophy would have opted for a choice of online focus groups, I made the conscious choice of gathering face-to-face groups. This decision involved tolerating the anxiety of the risk I took in the benefit of creating a similar environment to how CPTs interact in a group, including during their presential classes

and group supervision, to capture their attitude towards integration within a similar group setting.

As previously stated, my positionality and personal and professional experience might have influenced my engagement with data. The choice of critical realism was pragmatic in responding to the research question. The Bhaskarian critical realism paradigm was suitable for this project (Laclau & Bhaskar, 1998). The ontological realism and epistemological relativism of critical realism helped identify what I perceived as *realities* such as CoP, neuroscience and the hypothetical reality of integration through the understanding of how participants subjectively experienced and expressed their attitudes towards these realities within a group.

To conclude, this piece of research marked an essential step for me as a CPT. As a pragmatic scientist-'reflective'-practitioner CPT, this project is a step forward in my aim to enhance the understanding of the current and future place of neuroscience in CoP. Also, this project might encourage future research to explore this topic further and other topics, such as integrating knowledge of other disparate fields into CoP and pragmatically using them if they are suitable to the CoP profession and respect its values and ethos while helping the clients' reach their subjective wellbeing and growth.

4.6 The Chapter Summary

This chapter marked the end of this project by discussing the findings and situating them within a context. Additionally, it outlined the implications and limitations of the current study. The researcher concluded with a reflexive summary, sharing her internal processes and

discussing her choices, including the chosen methodological framework. This has offered an organic end to the current project.

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APPENDICES

Appendix A

Interview Schedule

- Opening:

  My name is Sarah Philippon and I will be the facilitator of this focus group. As stipulated on the information sheet, this group is gathered to discuss my research topic regarding integrating neuroscience to counselling psychology from your perspective as trainees counselling psychologists. This focus group will help answer the research questions and hopefully enhance our understanding of this possibility and or the feasibility of integration if any and also help emerging themes and new topics to be discovered.

- Housekeeping rules:
  - Breaks.
  - Phones.
  - Courtesy and respect.
  - Risk and distress.

- "Warm-up:"

- How does it sound to you if we go around the group to say our names?
- Reminder of anonymity and pseudonyms for confidentiality names will be changed.
- Not obliged to say your name

If you have any questions, I would be happy to answer them if not, shall we start recording and begin the session?

- Body:
  - Q1: At first, I would like to ask you about what comes to your mind when you hear the word 'neuroscience'.
  - Q2: How would you describe your knowledge of neuroscience?
  - Q3: What does integration mean to you?
  - QA: Metaphors???!!
  - Q4: What would be your attitude on integrating neuroscience into counselling psychology?
  - Q5: What would be the implications of this integration?
  - Q6: How would you integrate neuroscience into your practice, if any?

- Closing:
  - Do you have any thoughts or views that you would like to share?
  - What is the impact of the focus group today on your attitudes towards integration?
  - Thank you so much for your time and interactions. Here is the debrief form. I will now escort you to the exit and shall remain available to answer your questions via email should you have any.

Appendix B

A reflection on the final choice of the research question and topic

I find myself in a state of confusion as I have recently changed my research topic and question, which has now taken on a much broader perspective. It went from *what are counselling psychologists' attitudes on integrating NIBS into counselling psychology* to *what are counselling psychologist trainees' attitudes on integrating neuroscience into counselling psychology*. This change came about after I received feedback from my examiner, who granted me a conditional pass. After much consideration, I believe it is in my best interest to maintain a broader focus for my research. Initially, I perceived my internal processes, including thoughts, anger and sense of injustice, as a response to what I believed was the program's resistance to my chosen topic. However, upon further reflection, I realised that something else was at play. It seems that I may have lost faith in the idea of integrating NIBS (non-invasive brain stimulation) into counselling psychology. I recall becoming quite defensive when informed that my topic was controversial, but as I progressed, I found myself rethinking my entire career as a counselling psychologist. I went from being a 'staunch' positivist who believed in combining talking therapy and brain stimulation for the benefit of the client, without questioning the status quo, to a counselling psychologist trainee who is trying to navigate the uncertainty of not knowing. I am grappling with the possibility that the project I initially brought to the program may not align with my newfound values and identity of a counselling psychologist trainee. This realisation has left me feeling like a newborn in a world of hostilities, where my old beliefs are creating endless tensions with my new beliefs. I thought I had found a middle ground, a way to reconcile the worlds of physics and mathematics, where empirical and hypothetical reasoning reigns supreme, and uncertainty is seen as a mistake, with the subjective and unique world of counselling psychology, where everything is relative and uncertainty is a virtue. However, I found comfort when I thought of a co-existence of a world of quantum physics where uncertainty is a law of physics that changes the particle's characteristics and human science, where subjectivity distinguishes one individual from another. But despite this newer stance on my research topic, I still find myself struggling to cope with the uncertainty of my choice as similar research was already conducted in the past (Goss, 2016b).

Appendix C

An example of entries from the reflexive journal

Dealing with anxiety, feelings of inadequacy, and trying to practice self-care.

As I explored the literature on familiarisation with data from Braun and Clarke's book on reflexive thematic analysis, I found myself feeling a sense of incompetency. Despite my best efforts, I fear that I will not be able to produce work of sufficient quality in time for my thesis submission on September 4th. The process of immersing oneself in data to allow latent themes to emerge seems time-consuming, and it is difficult to approach data with the necessary level of suspicion in such a short timeframe. As a result, I am deeply concerned about the quality of my work, and I feel a weight in my stomach that seems to be growing larger and moving up into my chest. This pressure makes it difficult to breathe naturally, and I am struggling to maintain my focus and motivation.

Despite these challenges, I am trying to maintain a sense of self-compassion and to remind myself of the effort and sacrifice that I have already invested in this project. I know that the stress of submission can be overwhelming, and it is important to take care of myself and try to find balance in my life. I am passionate about my research topic, but I am also aware of the risks of burnout and the toll that a PhD can take on one's mental health. I have been reading about the experiences of other students and trying to learn from their struggles while also striving to maintain a sense of perspective and optimism. Also, I feel guilty as my uncertainty and anxiety seem to overshoot my enthusiasm and curiosity towards the research. Luckily some theorists seem to validate my experience and explain how doubt and unpleasantness are part of the research process and how curiosity and enthusiasm would not necessarily always have the upper hand in this long process.

However, I am determined to do my best and to produce work of a high enough quality to honour my participants and topic and meet the standards of my program. It might not be easy, but with perseverance, self-care, and a focus on my goals, I believe that I can achieve my goals and complete this important project. Of course, there might be limits to what I can achieve in the time available. If I am unable to submit my thesis by September 4th, I may need to consider applying for the write-up year.

Appendix D

The research advertisement

Counselling Psychologists Trainees Needed for A Research Study on Integrating Neuroscience into Counselling Psychology.

Who am I?
My name is Sarah Yousra Philippon. I am a final-year trainee counselling psychologist at the University of East London (**UEL**) and a former software engineer and business analyst. As part of my studies, I am conducting the research in which you are invited to participate.

What is the purpose of the research?
I am researching the **Attitudes of Counselling Psychologist Trainees toward Integrating Neuroscience into Counselling Psychology**. It will help understand the trainees' positions, if any, on the thought, feasibility and possibility of this integration. Consequently, it could help promote a change and perhaps suggest policies that might help future counselling psychologists voice their needs in terms of training, policies and new perspectives to research and practice.

You may qualify if You:
Are a counselling psychologist trainee.

Participation involves:
Asking you to attend a focus group in a designated location. The location will be at **UEL Stratford campus** at a designated time that will be communicated later on. The focus group duration is approximately one hour and a half. A moderator (myself) will ask questions related to the topic and moderate the focus group. The dynamic will have a form of an **informal chat** that will be audio-recorded via a secured device compliant with the ethics requirements.

Whom can you contact if you have any questions/concerns?
If you want further information about my research or have any questions or concerns, please do not hesitate to contact me:

Sarah Philippon | u1709155@uel.ac.uk | **07588100070**

Appendix E

Participant Debrief Sheet

PARTICIPANT DEBRIEF SHEET

The Attitudes of Counselling Psychologists Trainees on Integrating Neuroscience into Counselling Psychology.

Thank you for participating in my research study on identifying Counselling psychologist trainees' attitudes toward Integrating neuroscience into counselling psychology. This document offers information that may be relevant in light of you having now taken part.

How will my data be managed?
The University of East London is the Data Controller for the personal information processed as part of this research project. The University will ensure that the personal data it processes is held securely and processed in accordance with the GDPR and the Data Protection Act 2018. More detailed information is available in the Participant Information Sheet, which you received when you agreed to take part in the research.

What will happen to the results of the research?
The research will be written up as a thesis and submitted for assessment. The thesis will be publicly available on UEL's online Repository. Findings will also be disseminated to a range of audiences (e.g., academics, clinicians, public, etc.) through journal articles, conference presentations, talks, magazine articles and or blogs. In all material produced, your identity will remain anonymous, in that, it will not be possible to identify you personally. All personally identifying information will replaced.

What if I been adversely affected by taking part?
It is not anticipated that you will be adversely affected by taking part in the research, and all

reasonable steps have been taken to minimise distress or harm of any kind. Nevertheless, it is possible that your participation – or its after-effects – may have been challenging, distressing or uncomfortable in some way. If you have been affected in any of those ways, you may find the following resources/services helpful in relation to obtaining information and support: contact the health and wellbeing service at UEL via the student Hub on **+44 (0)20 8223 4444**

The researcher will be available after the group debrief for participants to answer their questions.

Whom can I contact if I have any questions/concerns?
If you would like further information about my research or have any questions or concerns, please do not hesitate to contact me.

Sarah PHILIPPON. U1709155@UEL.AC.UK
If you have any questions or concerns about how the research has been conducted, please contact my research supervisor Dr Sharon Cahill. School of Psychology, University of East London, Water Lane, London E15 4LZ,
Email: cahill@uel.ac.uk

or

Chair of School Ethics Committee: Dr Trishna Patel, School of Psychology, University of East London, Water Lane, London E15 4LZ.
(Email: t.patel@uel.ac.uk)

Thank you for taking part in my study

Appendix F

Participant Information Sheet

Version: 4

Date: 10/09/2022

PARTICIPANT INFORMATION SHEET

The Attitudes of Counselling Psychologists Trainees on Integrating Neuroscience into Counselling Psychology.

Contact person : Sarah Yousra PHILIPPON
Email : U1709155@UEL.AC.UK

You are invited to participate in a research study. Before you decide whether to take part or not, please carefully read through the following information, which outlines what your participation would involve. Feel free to talk with others about the study (e.g., friends, family, etc.) before making your decision. If anything is unclear or you have any questions, please do not hesitate to contact me on the above email.

Who is the researcher?

My name is Sarah Yousra PHILIPPON. I am a postgraduate student in the School of Psychology at the University of East London (UEL) and am studying for a professional doctorate degree in counselling psychology. As part of my studies, I am conducting the research that you are being invited to participate in.

What is the purpose of the research?

I am conducting research on the attitudes of counselling psychologist trainees toward the integration of neuroscience into counselling psychology. It will help understand the trainees' positions, if any, on how this integration might be possible, feasible or even thought about. Consequently, it might help promote a change, if any and perhaps suggest policies that might help future counselling psychologists further their knowledge and empower them to support or not this integration.

Why have I been invited to take part?

To address the study aims, I am inviting counselling psychologists' trainees. If you are a trainee counselling psychologist and the topic of neuroscience triggers any internal processes within you, then you are eligible to take part in the study.

Participation is voluntary, and it is entirely up to you whether you take part or not.

What will I be asked to do if I agree to take part?
If you agree to take part, you will be asked to attend a focus group in a designated location. The location will probably be at your university campus at a designed time. The focus group duration is approximately one hour. A moderator (the researcher) will ask questions related to the topic and moderate the focus group. The dynamic will have a form of an informal chat that will be audio recorded via a secure and compliant with the ethics requirements devise.

Can I change my mind?
Yes, you can change your mind at any time and withdraw without explanation, disadvantage or consequence. If you would like to withdraw from the focus group, you can do so by sending an email to the researcher at the email U1709155@UEL.AC.UK If you withdraw, your data will not be used as part of the research.

Separately, you can also request to withdraw your data from being used even after you have taken part in the study, provided that this request is made within two weeks of the data being collected (after which point the data analysis will begin, and withdrawal will not be possible).

Are there any disadvantages to taking part?
No disadvantages were identified to taking part in this study

How will the information I provide be kept secure and confidential?
Participants will not be identified during the data analysis or on any material resulting from the data collection or any research write-up. The data will be anonymised through the use of pseudonyms. The anonymised data will be accessible by the supervisor and the examiner upon request. No personal information will be retained for further contact. The demographic will be stored with anonymised raw data for research purposes. Moreover, participants do not have to answer all questions asked and can terminate their participation at any time resulting in the suppression of their material.

The information will be anonymised and then digitally encoded and stored in a confidential space protected with a password. At the end of each focus group, the audio recording will be moved directly to the researcher's laptop using a USB device and then to the UEL OneDrive through the university's safe internet connection (EduRoom network). Subsequently, the audio recording will be removed from the researcher's computer and the recording device). Once the transcription is validated with the supervisor, the audio recording will be deleted.

The other data, including transcripts, documentation and demographics, will be exclusively stored in the UEL One Drive, where they will be encrypted and password protected. The paper format material, if any, including the signed forms, and the computer, will be locked in a lockable filing cabinet at the UEL at Stratford campus. Only the researcher will have access to this information. The anonymised transcript will be sent to the supervisor and the assessor upon request via UEL email or shared through the UEL One Drive.

For the purposes of data protection, the University of East London is the Data Controller for the personal information processed as part of this research project. The University processes this information under the 'public task' condition contained in the General Data Protection Regulation (GDPR). Where the University processes particularly sensitive data (known as 'special category data' in the GDPR), it does so because the processing is necessary for archiving purposes in the public interest, scientific and historical research purposes or statistical purposes. The University will ensure that the personal data it processes is held securely and processed in accordance with the GDPR and the Data Protection Act 2018. For more information about how the University processes personal data please see www.uel.ac.uk/about/about-uel/governance/information-assurance/data-protection

What will happen to the results of the research?
The research will be written up as a thesis and submitted for assessment. The thesis will be publicly available on UEL's Online Repository. Findings might also be disseminated to a range of audiences (e.g., academics, clinicians, the public, etc.) through journal articles, conference presentations, talks, magazine articles and or blogs. In all material produced, your identity will remain anonymous, in that, it will not be possible to identify you personally. All personally identifying information will be replaced.

Anonymised research data will be securely stored by the researcher.

Who has reviewed the research?
My research has been approved by the School of Psychology Ethics Committee. This means that the Committee's evaluation of this ethics application has been guided by the standards of research ethics set by the British Psychological Society.

Whom can I contact if I have any questions/concerns?
If you would like further information about my research or have any questions or concerns, please do not hesitate to contact me.

Sarah PHILIPPON. U1709155@UEL.AC.UK

If you have any questions or concerns about how the research has been conducted, please contact my research supervisor Dr Sharon Cahill School of Psychology, University of East London, Water Lane, London E15 4LZ,

Email: cahill@uel.ac.uk

or

Chair of School Ethics Committee: Dr Trishna Patel, School of Psychology, University of East London, Water Lane, London E15 4LZ.

(Email: t.patel@uel.ac.uk)

Thank you for taking the time to read this information sheet

Appendix G

The consent form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

The Attitudes of Counselling Psychologists Trainees on Integrating Neuroscience into Counselling Psychology.

Contact person : Sarah Yousra PHILIPPON

Email : U1709155@UEL.AC.UK

	Please initial
I confirm that I have read the participant information sheet dated 26/09/2022 (version X) for the above study and that I have been given a copy to keep.	

I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
I understand that my participation in the study is voluntary and that I may withdraw at any time, without explanation or disadvantage.	
I understand that if I withdraw during the study, my data will not be used.	
I understand that I have two weeks from the date of the focus group to withdraw my data from the study.	
I understand that the focus group interaction will be recorded using an audio recording device.	
I understand that my personal information and data, including audio/video recordings from the research will be securely stored and remain confidential. Only the research team will have access to this information, to which I give my permission.	
It has been explained to me what will happen to the data once the research has been completed.	
I understand that short, anonymised quotes from my focus group level data may be used in material such as conference presentations, reports, articles in academic journals resulting from the study and that these will not personally identify me.	

I would like to receive a summary of the research findings once the study has been completed and am willing to provide contact details for this to be sent to.	
I agree to take part in the above study.	

Participant's Name (BLOCK CAPITALS)

……
……

Participant's Signature

……
……

Researcher's Name (BLOCK CAPITALS)

……
……

Researcher's Signature

……
……

Date

……..……
……

Appendix H

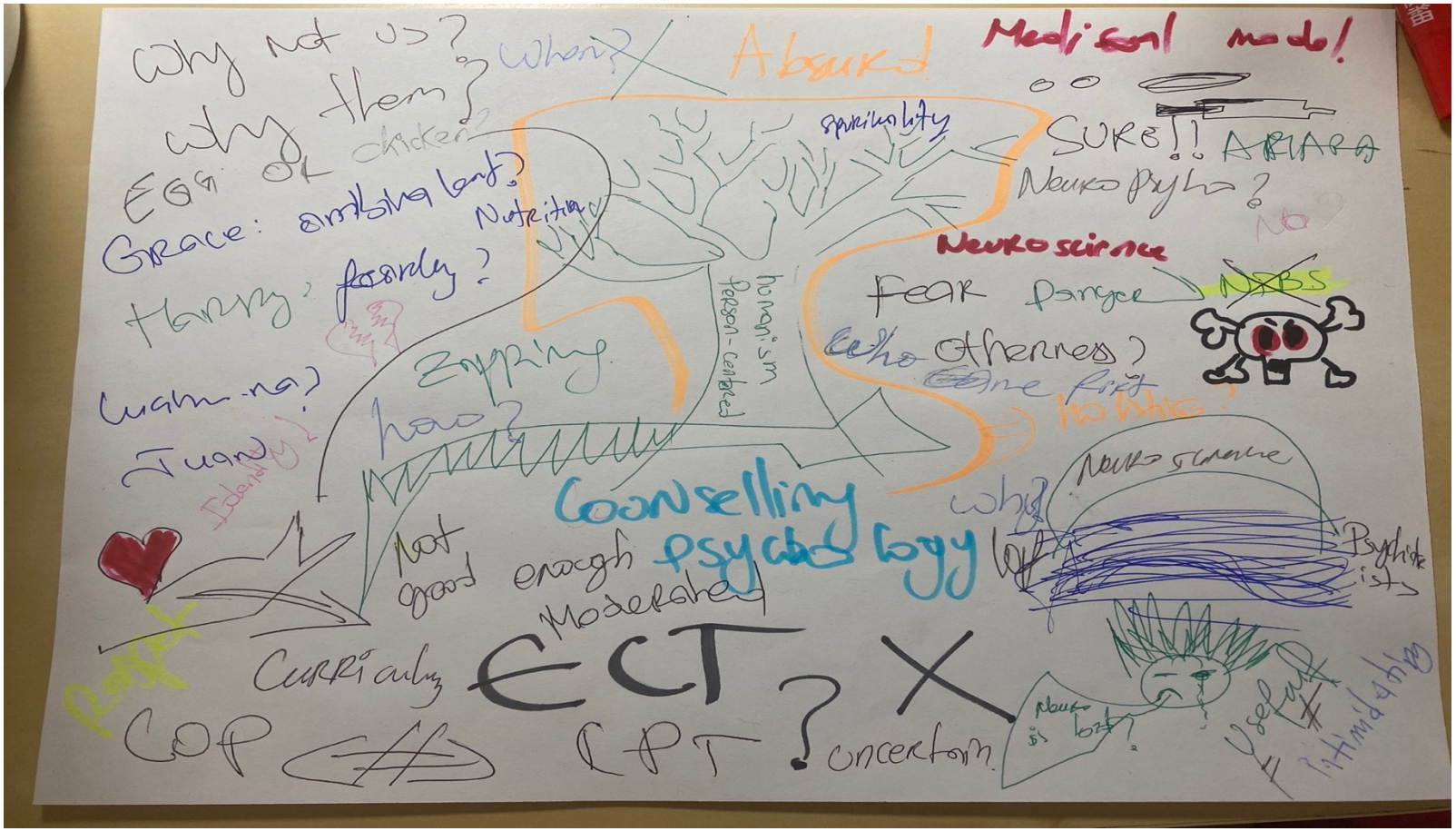
Transcription guide key

Symbol	Its meaning
[Pseudonym]:	The participant's pseudonym
Researcher:	The researcher
()	Non verbal interactions
(.)	Sort silence
(..)	Longer silences
(?)	The audio is not clear to transcript
[	The start of overlapping
]	The end of overlapping
=	No silence between interactions

Inspired by Bailey 2008

Appendix I

A doodle



Appendix J

A fragment of a coded transcript

Speaker	Comment	Codes	Group dynamic / notes / Reflections
Researcher:	I have now started the recording. So just to introduce myself. I'm Sarah Philippon, I'm a third year counselling psychologist trainee at the University of East London and I am going to be the facilitator and the moderator of this focus group. So as I stipulated this focus group is around the integration of neuroscience into counselling psychology. How I would like to discuss this topic? The whole idea. I would like... that ... this focus group might help us answer some questions about maybe understanding the possibility and the feasibility of this integration including perhaps advantages and disadvantages.. So if you have I would like to start and I'll ask you this question. When you hear neuroscience, what comes to your Mind?		

Imane:	Sciencey stuff. Yeah. Hardcore lab coats people with, on this mug… (pointing a mug with a picture of baby with EEG cap on their scalp that I brought from the baby lab) there's this image of a baby with lots of stuff. That's what comes to mind.	Neuroscience is complex. Neuroscience is rigid. Neuroscience is scientific.	I could not find the plastic-free cups I bought in the kitchen. I had to go downstairs to find mugs from the baby lab). I had a choice between multiples mugs but for some reason I took the one with the capped baby. What made me make this choice? Is it a cognitive probing? Did I want to influence my participants opinions / attitudes on the integration? Babies lovable creature? don't we tend to like things that baby do? I thought it was a random choice but it appears that things were already cooking in the background. Is this a blind spot I need to attend to while analysing this particular focus group? DYNAMIC: An uncomfortable avoidant eye-contact. An anxious tone.

Thomas:	I think for me cuz I did a module of neuroscience in my undergraduate and I did a little bit touch a little bit on it in my masters. And I think for me I was always really interested in neuroscience anyway. Actually at one point was considering going down that route. I think for me it's really the study of the biology of the brain and how the brain works. So it's really not just is the brain in terms of how it impacts our behaviour, but it's really looking at in depth like synapses and what they are and when they fire what then happens. And maybe also how medication actually alters, how the brain also operates functions. And also one of the things that I was really interested in, particularly in my third year was how for example, experiences trauma can also change how the brain responds chemically to things. I think all of those things are kind of, I see perhaps in line with the study of neuroscience.	NK comes from an undergad training. An additional NK from postgrad training. A personal interest in N. N is the study of the biology / function of brain. N is the study of how the brain affect the behaviour? The use of neuroscience jargon. Neuroscience helps understanding / treating trauma.	
Scarlet:	I think for me I studied combined neuroscience and psychology as part of my bachelor degree because again I was interested in neuroscience, I wanted to kind of work in that field perhaps that was a long time ago. But I think what I remember from it, again, it was more biology of the brain, knowing the brain, different parts of the brain. And I think it was to do a lot with lots of hormones as well. Kind of understanding the endocrinology, if that's right word. Yeah. So	NK comes from an undergad training. N is the study of the brain and hormones. The use of neuroscience jargon “Sciencey stuff”	A use of the same word as Imane. A need for consensus? Not wants to induce othering?

	it's more about that. I think that's what I remember, the sciencey stuff.		
Thomas:	Yeah. And I think for me that's what I think coming into psychology I thought would be more, it would be more emphasis on the biological side as well as obviously the other stuff that we learn because we had a whole module on it in my first, my bachelor's as well the final year. And I think perhaps, I think in the whole of my bachelor degree, I think that's probably the module I enjoyed the most. Yeah cause I just feel and I have felt that subsequently since finishing my bachelor's, it hasn't really been that much of an emphasis on neuroscience really at all. It's kind of mentioned in passing and I think perhaps the only reason why it was probably focused on in my masters was because I did a master in clinical forensic psychology at the institute of psychiatry. And they're very much science, science, science, science. That's all they really care about. And it's like led, it's run by psychiatrists. So a lot of them obviously have to deal with medication and have to deal with structure of the brain and what happens to the brain. So there was some emphasis there. But I feel like overall since my bachelor's, it hasn't really, and only my final year of my	An interest in neuroscience. Psychology degree do not encourage neuroscience knowledge acquisition. Neuroscience knowledge relates to scientific studies. Comparison between psychology and psychiatry educational institution in the emphasis on neuroscience knowledge. Psychology degrees do not care about neuroscience. A regret related to not having had enough neuroscience knowledge in CoP taught programme.	

	bachelor's, there hasn't really been that much of a focus on neuroscience really.		
Scarlet:	I mean I think I remember <laugh> wearing lab coat going to the lab and I dunno if that's the right pronunciation, but I think it was more to do with titration and chemistry and that enough elements put enough of something into another thing And wait, I can't remember exactly, but that was going to lab quite a lot and I think that was something that put me off and I decided to just put that to a side after the third year and just carry on with psychology because although I was very interested more to know about the brain, different parts, how it works, how it affects the human being, particularly with my personal experience. And my brother, he's disabled, he has a spinal injury. So I guess I always wanted to know a little bit about the brain and the spine, how they work and things like that, which is a separate thing. But yeah, I think going to the	A rejection of the experimental / lab side of neuroscience. Neuroscience could be experimental. A family history relates to the interest in neuroscience. Psychology is not experimental.	

	lab and just working with those things, I can't remember the name with something that I was like, oh no, I don't wanna do this so let's just carry on with psychology.		
Thomas:	I think we may actually recall really going into the lab, but I think it would be helpful actually cuz perhaps to understand how medications perhaps impacts the brain. And I feel like I remember very clearly the structures of the brain and knowing what the hindbrain does, the full brain and different, the different aspects of the brain and how the lower level functioning and what parts of the brain have really focused on that. And I remember the only time that I've, well really the first time I used it in a practical way was when I think I had finished, what did I do? I finished my master's and I was working as an assistant psychologist in the anger management service. And there was a lot of actually in our training, informal kind of training around the brain and when something happens and how we respond to that, why do we respond in that way? Because obviously the lower regions of our brains are the ones that which deal with kind	A justification / defence for the lab work in neuroscience. Neuroscience involves pharmacology. The neurobiology of anger. Neuroscience helps understand emotions. Neuroscience underlies psychological interventions. Neuroscience interventions helps regulate emotions. Neuroscience helps anger management Neuroscience facilitates psychological processes such as decision making and problem solving. NK helps psychoeducation around anger. An enthusiasm of neuroscience. Neuroscience helps clients.	A gentle disagreement.

	of reflex action are ignited at that point in time. And what we were trying to help clients do was we would say pause. And if you pause then that gives information enough time to get from your lower regions of the brain to the more higher region of your brain that do with higher level functioning. And then you're able to make more what you call it helpful decisions. You're able to apply reason to what you weigh the pros and cons. Is it okay for me to punch this person? Probably not. Okay, how else would I respond in this situation? And there was a lot of that because there was a lot of obviously violence involved and obviously anger management. So really helping clients understand the importance of the consequences to our actions before it's too late before the fact.		

Researcher:	I want to pause there for a moment and just ask Imane first, how would you describe your knowledge of neuroscience?		Imane looked a bit lost between those two persons who seem to know a lot about neuroscience. Before the recording she expressed how she does not have any knowledge about neuroscience. At this stage, I wonder whether she is intimidated by the two other participants to the extent that this might prevent her from expressing herself and her attitude around neuroscience and its integration into CoP.

Imane:	It was when I was younger, classic Asian who wants to be a doctor. But when I set off on that journey for whatever reason I just decided it's not going to be for me. Then I thought okay, maybe pharmacy. So I decided to embark on that and then I realised I can't be handling boxes and something I don't believe in and I don't think throwing me pills at a problem is always going to be the option. So then I started looking into psychology and then when I found the neuroscience aspect of it, I just thought it was very pharmaceutical led and I just thought this kind of pushes the notion that medication is the way forward or it's the only treatment approach. And I just thought to myself, this is not why I believe in cuz I'm very much into alternative healing and a holistic way of being. And so I just thought, okay, and that kind of put me off neuroscience but actually when you speak about trauma and how it changes the brain and how things like depression and anxiety, we can talk about emotions, we talk about expressions, but actually what happens for that person in their mind, what changes in their mind? So then when you have to pull it back and kind of go to bare building blocks of what's going on in our mind, it's so relevant. And I think our discussion here is making me realise how there's a massive bridge that needs to be covered between how we feel, how we process things within a counselling session, but also	Neuroscience relates to pharmacology. Neuroscience is not of interest. Neuroscience is determinist. Neuroscience is another aspect of the medical model. Neuroscience strengthen the domination of the medical model within psychology. A contrast between a past position and a position now after listening to other participants. Neuroscience is not an alternative way of healing. Neuroscience might not be integrated in a holistic framework. The effect of the focus group on the shift of the position. Neuroscience might help understand psychological phenomena. Neuroscience used interchangeably with pharmacology. Neuroscience could be integrated to the psychological work? Neuroscience helps explore psychological distress from a distinctive perspective. Neuroscience is useful. Neuroscience could be part of a holistic approach in CoP. An anxious tone when expressing a lack of interest in neuroscience. Neuroscience helps understand what happens to us in case of trauma Neuroscience / pharmacology is powerful	Is Imane fawning because of the stress or she is genuinely experiencing neuroscience from another perspective only after a few minutes from the start of the focus group????

	what's going on in the mind. So right now the job that I actually get paid for, I work an acute mental health ward and I see people with schizophrenia, depression, anxiety in peak crisis. But I see now that medication has its place. But I also see that actually they also benefit from a combined method of having the medication, also having talking therapy and going through this therapy and that therapy and combined is a much better way of dealing with a problem from different angles. And now we've got social workers and social therapists and stuff coming in. So now that person has more of a holistic healing, but then it goes back to bridging that gap. You can never be one or the other, but my knowledge base on that because my interest is just not there prior, it's only recently that I've been looking into it because I'm really into trauma. But then I guess I have to ask myself, how does trauma change a person? We could argue your emotions change or your responses change. Or when we talk about fight flight or freeze or fawn, we then talk about what happens in the brain, what happens to the body. And then in order to understand that you can't ignore something so big. So now I've started to look into it but honestly before it was one of those things where I just like, ugh, it's another pharmaceutical kind of business, money making, let's create the pills and then create a problem to give the pills for. But I'm	economical tools for pharmaceutical lobbies. Working in a psychiatric ward might help shift the stigma about neuroscience. Neuroscience has its place in CoP. There is a need for Neuroscience.	

	very opinionated when it comes to that. But yeah, <laugh> honestly just working in that ward and watching the patients benefit from a dose of whatever and I'm just like, okay, clearly there's a need for it and it has its place.		

Researcher:	So I heard you saying "that put me off neuroscience ". What did put you off neuroscience in this case?		
Imane:	I think the heavy kind of emphasis on that's the biological side of things and it's sort of the disconnect from emotions and life and experience and just crappy things happen to people and they experience the sadness. It's not just a default in the brain. Someone can go through really traumatic event and it can really upset them and why? And then I honestly really try and understand someone can go through the same trauma to people. One of them can come out the other end and get through it and still live life. The other is completely wounded and cannot live life again. Why does that difference exist? So if we're going to say we are just going to throw pills at people, they're working differently for both of them. So clearly there are other things at play here. So dunno if I answered your question, but	Neuroscience aspects "puts the CPT" off. Neuroscience is "heavily" biological. Neuroscience is unidimensional The biological side of neuroscience is not appreciated. Neuroscience is undesirably? unpersonal / objective? Neuroscience does not consider psycho-social factors. Neuroscience is not holistic? Neuroscience does not answer the individual differences in trauma?	
Researcher:	I think yeah, the answer is that from what I understood is that it lacks this holistic part of it, so it was very, very medical or pharmaceutically you said oriented. So this.. you are traumatised because your brain is not working this way or you had instead of just...		

Imane:	Let's look at human lived experience and let's look at what happened for that person. And then all of those things have their own place in that. But yeah, awareness and knowledge is important. You can't just shy it out because it's good. It's good to be informed about what you oppose or what you don't know or you don't understand. It's good to know what it is if you're going to take a stance against it, at least know what it is before you take a stance. So that's what I'm going through right now.	Neuroscience does not take into consideration subjectivity. An opposing position towards neuroscience. Knowledge is power including neuroscience An overt position against neuroscience? Knowledge about neuroscience is important in order to reject it?	It is interesting how Imane does overtly say she opposes neuroscience and she would like to know more about in order to have more evidence to stand against it? Am I missing something?
Researcher:	So you're trying to understand more what know neuroscience is in order to understand...		
Imane:	Space, in order to understand its space, what it's doing, its role. What if I still don't like it? Why I still don't like it? So when I'm asked I can defend it and be like listen, had a good look and I don't, it's not for me but, yeah...but I can see its place and I can see if we were to have that focus movement, counselling, psychology, I see its purpose but yeah, a lot more dialogue. A lot more research. There's not much out there linking the two I don't think. If there are, you've got to dig.	A curiosity about neuroscience. An assertion about not liking neuroscience. Neuroscience knowledge is a pre-requisite / tool to reject the integration? Neuroscience knowledge is a pre-requisite to answer the question of integration. A leaning position towards rejecting neuroscience. A need for research on neuroscience within CoP? There is no link between CoP and Neuroscience?	a tentative and open position around neuroscience knowledge. However, my reading of Imane's words imply more of a rejection of neuroscience and the acquisition of knowledge might be tinted with this tentative yet rejecting position of neuroscience and its integration into CoP.
Thomas:	=Yeah, that's very true. Yeah.		Consensus
Researcher:	So when you say research in terms of neuroscience and...		

Imane:	Counselling Psychology		
Researcher:	Counselling, psychology, Right.		
Imane:	I don't think it's not the two. You would never marry them.	integrating neuroscience into CoP is sinful? CoP and N will not marry	
Thomas:	Yeah, I think they seem opposing, they don't go hand in hand.	Neuroscience and CoP are opposing. The opposing aspect of CoP and neuroscience is on the surface.	Does Thomas sound categorical? What does this consensus mean?
Imane:	=They just look like two divorced things.		
Thomas:	=They don't seem to go hand in hand.	The shift from assertion / certainty to tentativeness.	Repetition to convey the message? Why would Thomas repeat the similar sentence. What is this need for repetition and redundance? However, I noticed a shift from assertion / certainty "they don't go hand in hand" to "They don't seem to go hand in hand" tentativeness. Does this indicate reflexivity and a change in the position under the influence of the group?

Imane:	They don't. Yeah, you wouldn't imagine. But then again you wouldn't imagine counselling and psychology together the two terms. Yeah. One seems like oh let's just have a chat. The other seems a bit more measured so then when you put them together. Yeah. Anyway, yeah, yeah. Interesting stuff.	A possible unconscious detachment from the anti-integration position. Counselling and psychology could not "marry" / were "divorced" in the past. Counselling is different from psychology. Psychology is more realist / positivist / objectivist than counselling? A comparison between counselling and psychology on the one hand and counselling psychology and neuroscience. The integration of neuroscience and CoP might be possible? / Interesting?	The use of the "you" pronoun to convey and "I" statement.

Thomas:	But I think even the face of psychology is changing because I think I went to the counselling psychology conference whenever it was, I've lost track of time some time ago to talk about this research that I've been doing forever. And there was that argument around what is it that we're really standing for? And whether the term counselling psychology really is accurate, is valid and whether it needs to take into consideration a lot of the different components and perspectives and ways of just doing psychology as it can. Because I think like you said, counselling, it doesn't really suit the position that we hold. And again, people hear counsel, they just think you're a counsellor. So I actually know I'm actually a psychologist, but this is, so I think there is and even I was saying finding a way of marrying the medical medical model in some ways more into our profession as well. Because I think all of the things I think I've always come across is obviously if you're working particularly with the NHS and a lot of capacities within the NHS, we're working with the medical model and we are working, usually there's a hierarchy in terms of the MDT and we're working with the psychiatrist at the top of that hierarchy. So a lot of what we kind of do has to take into consideration a lot of the components of the medical model even if we may not at our core agree with it. And I think even you were saying, I started off thinking	CoP / Psychology? identity / values are changing. Counselling psychology is a confusing name. A realistic perspective on CoP name / identity. CoP training is anti-medical model. CoP training does not include the medical model. The medical model is important for CPs who work in the NHS. Many CPs work in the NHS. A personal choice of Dpsych underlies an anti-medical position. CPs work involve the medical model. The need of emphasising the anti-medical model position. A lack of power of CPs in the NHS draw them to use medical model. The medical model knowledge can empower CPs who work in the NHS. The medical model knowledge is important in MDT work. CoP training should include also models that are against its core values. A need for justification of the need of acquiring knowledge related to the medical model. The need of wanting to learn the anti-medical model. Comparison between CPTs and CLPTs. CLPTs do not lack of knowledge on the	I experienced a lot of difficulty in coding this segment. I do not know how to code it in relevance to the research question. I guess I'll have to discard all the irrelevant codes. There is an assumption that neuroscience is part of the medical-model.

	I'm going to be a doctor, medical doctor and I realize actually I have a lot of issues around the medical medication and prescription and pharmaceutical companies and all this. I have a lot of issues around them and I think that's why I kind of came to psychology route. But I haven't found, I think with clinical psychology, I think there is more of a focus on the neuroscience. I think they do have a module, I'm not sure, I believe that they do have a module on or more of a focus on neuroscience anyway than we do and cause they're very much aligned with the medical model. But I do feel in some ways that even if as Counselling psychology may not agree with a particular stance, I feel like we'd need to have an more of an awareness of what these things are. So when we find ourselves in certain spaces, then at least we have that even foundational knowledge about the brain and medications and how like you said with trauma, how issues and situations can impact on the brain and change maybe the way the brain operates. And I feel like we haven't really, well I feel like I've not particularly gotten much of that from the doctorate. And I think even at the end of our doctorate they were talking about going off and doing a course on neuroscience. I don't know what kind of course it was but I don't know it was a year's worth of course on neuroscience. I was like okay well we then find a way of if we	medical model. A belief that CLPTs receive neuroscience training. An anti-model position should not exclude training about the said model. CPTs needs to make an informed decision before rejecting a model. Knowledge / training is a pre-requisite before standing for or against something including neuroscience / the medical model. NK is important for CPTs Neuroscience training is necessary for CPTs. The suggestion for an elementary neuroscience training within CoP taught curriculum. A feeling of being left behind compared to CPTLs. CPs are considering doing an extra neuroscience training. Dedicating a whole year for neuroscience is unfair? The need of integrating neuroscience knowledge in CoP programme.	

	realize it's important, we find a way of integrating it somehow into what it is that we're doing.		

Imane:	But now, that you said that whole difference is what kind of separates us from clinical psychology? Yeah, this is a whole facade of where we kind of stem away from the medical model and that's all clinical psychology. This is the reason I ended up going for the counselling and not the clinical in the best place because I didn't want to be so medical model led. But then here we are where we're faced with, there is some kind of importance in it. But yeah,	A defensive reflection on the CoP identity. Neuroscience might be important. The medical model is an exclusion criteria to join a doctoral programme. Medical model might / is important. The interchangeable use of neuroscience and the medical model? The acknowledgement of a dilemma.	Were the participant defensive? Or is it my own defensiveness whenever I perceive a contrasting view to my pretended open and pragmatic view?
Scarlet:	I guess it goes back to acknowledging that we all have brain, isn't it that different perhaps life experiences, which I personally believe that all those difficulties or mental health difficulties that we all experience or at some point in our lives to some degree goes back to a past trauma. So I think trauma is at the core but I think there are lots of other things as well like addiction, eating disorder, alcohol difficulties, problems with drinking out alcohol and so many other things. So agreeing that we all have a brain and life experiences or stress or whatever they call it can affect our brain. But maybe as Imane said, we might have different experience we might be able to carry on but that doesn't mean that our brain is not affected or we are not implying that the region of the brain will be exactly will affected in the exactly same way but perhaps there are some what you call it impact, if that makes sense. If I am making sense, I dunno. But I think yeah,	We all share the same biology. The biology / neuroscience / brain underlies psychological distress. Acknowledging the importance of biology does not refute the subjectivity of the human distress. Hesitancy / tentativeness. A biological perspective on human distresses are not enough? Neuroscience help understand psychological distress. A personal interest / enjoyment / of neuroscience. The importance of using neuroscience to bridge between CoP and the medical model?	

	so I think when we say counselling psychology, I agree. I think that's also one of the reason why I wanted this study because it's more about human is more about understanding the experiences is more about looking at idiosyncratic experiences rather than just kind of saying, oh you have a stress, you have anxiety and putting them into boxes. But I think there is brain here at the top and it will be affected somehow. And I think neuroscience is helping us to understand that. I enjoy reading about the brain, about the neuroscience, about the newer transmitters, the synapses or the hormones. If that comes under neuroscience, I'm not sure, I'm not very knowledgeable. But yeah, I think it's very important that we bridge that we have that some knowledge of..		

Thomas:	I think it's important like you said, I think we all have a brain and when I came to psychology I thought when I heard things like names, schizophrenia, psychosis and depression, I thought literally you can take a scan of someone's brain and be able to see okay, there's that point that has a defect and then we need to do something about that particular region of the brain and then the person will be fine. Or the medications that people are taking, they take this medication and it targets that specific region of that brain and then they're better than they were. And I think science has actually shown that the brains of people with quite severe kind of psychosis and schizophrenia is different in a lot of ways. And I think people have been able to see it, researchers have seen it on scans. So we know that there is something that is happening biologically, physiologically with this individual that either has been caused by whatever it is that they're experiencing or either as a result of it or is the thing that has caused it one of the two. And I think there's still, science still has a long way to try and explain that, but I think it's really helpful to be able to.... in many ways kind of look at the physiology of the body and be able to see, okay, why are these changes happening? Because obviously there is a physical change that is happening. And I think for me, obviously I came into the counselling	The illusion of the biomarkers / lateralisation & localisation / of psychological "disorders". The brain differences of the severally distressed people compared to (?) the norm?! Science supports the importance of considering the biological factors in the understanding of psychological distress. Biology / neuroscience might help the understanding / treating psychological distress from the Power Threat Meaning Framework. There is a relation between the biology (neuroscience) and the lived experience in psychological distress. The need for a holistic perspective in understanding / treating? psychological distress?	I sometimes refrain to ask questions even though I might need more information about an unclear point. However, I feel insecure as I try to be the moderator not the interviewers. Two roles that I identify as distinctive. How to find the balance between the importance of exploring a point relevant to the research question and simultaneously do not hinder the dynamic of the group by constantly interfering and asking question. I feel confused and helpless!!!

	psychology cause I love to explore the lived experience of the individual and particularly this new power threat meaning framework. Really changing our viewpoint on how we look at problems I guess that people are having. And it's not what is wrong with you but what has happened to you, something has happened to this body, this individual both psychologically and physically. And we know even with the various therapeutic techniques that we do use, that there is a relationship between the mind and the body. Like if you are someone that exercises and you're someone that goes out and your social body, usually your mental health's probably a bit better than someone who stays at home all the time, doesn't speak to anyone, is very isolated, doesn't eat very well, doesn't do much exercise. We know that these things affect the mind. So I think it's really helpful to be able to continue to explore the relationship between the mind and the body. And then I think in doing so then it would help and improve the way that we as practitioners then see the person that's sitting in front of us and care for that person in a holistic way like you said. Yeah.		

Appendix K

An example of initial theme generation

Themes	Renamed themes
Neuroscience is impersonal	
The rejection of neuroscience integration	
Talking about neuroscience feels uncomfortable?	
the educational and professional system created a gap between neuroscience and psychology	
The multitude of the integration means	There are many ways to integrate neuroscience into CoP
Neuroscience a persona non grata	Neuroscience a persona non grata
Neuroscience is already integrated	Neuroscience is already integrated into counselling psychology
OBSOLET CODE?	
A dynamic / observation?	
Neuroscience is interesting	
Pro neuroscience integration Attitude	A positive attitude towards integrating neuroscience into CoP
Neuroscience is scary / Threatening	
Neuroscience is useful / important / relevant to CPTs work	

CoP is enough	
Neuroscience is not an evidenced-based field	
integrating Neuroscience is pragmatic	
The stigma of NIBS	
A fear to lose CoP identity is behind the rejection of neuroscience	
The rejection of integrating NIBS into CoP	
A careful openess towards integrating NIBS / neuroscience into CoP	
The perception of CPTs on their neuroscience knowledge	
Integration could be transversally useful to CoP	
De-demonisation of neuroscience	
Reasons for attitudes regarding the integration	
The dangers of rejecting neuroscience	
The similarity and the difference of the philosophical underpinnings of neuroscience and CoP	
The importance of the clients' beliefs and attitudes on neuroscience as a pre-requisite to the integration debate	
Using neuroscience may create a power unbalance between Clients and CPs	
Integration and its importance in the biopsychosocial model	
Definition of neuroscience	
CPTs perception of neuroscience	
A code to which I can not find an excerpt	
Impact of the focus group on CPTs attitude	
The integration is not needed	
A culturally related distress cannot not be treated with neuroscience	

who are we?: on a CoP identity	
integrating Neuroscience can bridge the gap between CoP and disparate fields	
A need for integrating neuroscience knowledge into CoP	
Neuroscience helps make sense of psychological distress	
The impossible co-existance of neuroscience and CoP	
Neuroscience informs the impact of pharmacology on therapy.	
Neuroscience can be used / should be in line with the humanistic CoP values	
integrating Neuroscience into CoP is difficult in the here-and-now	
Talking on the behalf of clients about neuroscience and therapy	
Links between CoP therapeutic work and neuroscience	
What is psychology?	
CoP is / can be / should be / hollistic	
A need for research on neuroscience and CoP	
CPTs perception of integration	
Difference between integration and pluralism	
integration of N into CoP should be within CPs level of compentence.	
The philosophical underpinning of psychological distress	
Neuroscience has its place in CoP	
Integrating neuroscience into CoP could be empowering	
The strain of integration on CPTs/CP	
Neuroscience can be integrated into CoP upon conditions	

Appendix L

An example of clustered codes by themes

Themes	Codes
Neuroscience knowledge come from previous interest and training	NK comes from an undergad training.
	An additional NK from postgrad training.
	A personal interest in N.
	NK comes from an undergad training.
	An interest in neuroscience.
	Neuroscience knowledge relates to scientific studies.
	A family history relates to the interest in neuroscience.
	Neuroscience knowledge comes from placements.
	Neuroscience knowledge in placements is related to the choice of the therapeutic approach.
What is neuroscience?	N is the study of the biology / function of brain.
	N is the study of how the brain affect the behaviour?
	N is the study of the brain and hormones.
	Neuroscience involves pharmacology.
	Neuroscience relates to pharmacology.
	Neuroscience helps understanding neuroplasticity.
	Neuroscience helps understanding / treating trauma.
	The neurobiology of anger.

Neuroscience helps understand psychological distress and phenomena from a biological perspective	Neuroscience helps understand emotions.
	Neuroscience facilitates psychological processes such as decision making and problem solving.
	Neuroscience might help understand psychological phenomena.
	Neuroscience helps explore psychological distress from a distinctive perspective.
	Neuroscience does not answer the individual differences in trauma?
	The biology / neuroscience / brain underlies psychological distress.
	Neuroscience help understand psychological distress.
	NK could explain the functionality of psychological distress from a biological perspective
	Neuroscience can explain how spirituality help in psychological distress.
	The neurobiology of trauma.
	The brain changes when exposed to traumatic events.
	The possibility to reverse the brain changes caused by trauma.
	How does spirituality influence the brain.
	The neuroscience of spirituality in trauma?
	A bio-psycho-social reflection on trauma.
	Neuroscience could be a tool to understand the brain underpinning of psychological distress.
	Neuroscience can help understand the brain change caused by exposure to trauma / psychological distress.
	The interest in the neuroscience of spirituality.
	Neuroscience knowledge / research helps the choice of psychological interventions.
	NK will help the acquisition of a biological understanding of psychological phenomena.
	The conviction of the neuroscientific underlying of trauma.
	Neuroscience can help CPTs understand how trauma "shapes" the brain.
	Clients might find psychological distress "abstract" / difficult to understand.
	Neuroscience can help illustrate psychological distress from a "physical perspective.

	Neuroscience can give an understandable alternative explanation to psychological distress.
	Integrating neuroscience into CoP might help answering the "why" of the psychological distress.
Neuroscience is missing in CoP	The absence of neuroscience from the CoP training.
	CoP training is missing depth in terms of neuroscience.
	Neuroscience knowledge is missing in CoP.
	There is a "hole" in CoP trainings regarding neuroscience.
	The experience of a neuroscience gap training within CoP is a shared experience.
An enthousiastic attitude towards integrating neuroscience into CoP	An enthusiasm of neuroscience.
	A personal interest / enjoyment / of neuroscience.
	A wounded healer testimony might contribute to the desire of integrating neuroscience knowledge into CoP training.
	A fascination for the neuroscience of trauma.
	A personal curiosity and a professional interest of neuroscience.
Neuroscience knowledge is helpful and beneficial for CPTs and clients	Neuroscience helps clients.
	Neuroscience is useful.
	There is a need for Neuroscience.
	We all share the same biology.
	Science supports the importance of considering the biological factors in the understanding of psychological distress.
	As CPTs we might benefit from NK.
	NK will help sign-post a certain population of clients for medication??
	NK can help give rationale to clients for existing complex "symptoms"?
	Neuroscience psychoeducation is helpful for clients.
	Neuroscience can help deliver the best care for some clients.
	Neuroscience has its merit.
	Psychology degree do not encourage neuroscience knowledge acquisition.

The systemic dychotomy between neuroscience and psychology (CoP)?	Comparison between psychology and psychiatry educational institution in the emphasis on neuroscience knowledge.
	Psychology degrees do not care about neuroscience.
	A regret related to not having had enough neuroscience knowledge in CoP taught programme.
Neuroscience underlies psychological interventions	Neuroscience underlies psychological interventions.
	Neuroscience interventions helps regulate emotions.
	Neuroscience helps anger management
	NK helps psychoeducation around anger.
	Neuroscience underlies CBT interventions.

Appendix M

An example of the list of obsolete and irrelevant codes for a focus group

Code	Type	Comments
Neuroscience is not an alternative way of healing.		I am under the impression of missing something. I am coding in relation to the research question. Finding only three codes in this large excerpt feels not enough. Perhaps the participant was right when they said that it was a tangent. I realised it was so.
The medical model is an exclusion criteria to join a doctoral programme.	I did not know how this code answers the research question	
A biological perspective on human distresses are not enough?		
The illusion of the biomarkers / lateralisation & localisation / of psychological "disorders".		
The brain differences of the severally distressed people compared to (?) the norm?!		
Spirituality is an important factor.		
CPT does not follow neuroscience research.		CPTs knowledge on NK research is limited
???		
CPs should not use exclusively the medical model??		
CPs should not give diagnosis?		
The use of the feminine pronoun instead of the inclusive pronoun when talking about clients.		
Labelling might be helpful for some clients.		
The use of the mind and brain interchangeably.		
The choice of CoP training is based on not having neuroscience?		
N training should be linked and exploratory.		
Psychology is not experimental.	I did not find an exerpt for the code	Repetition to convey the message?
The double standards towards scientific concepts?		
The need of wanting to learn the anti-medical model.		I observed a peculiar transformation in Imane after joining this group. She spoke in a manner that suggested religious connotations, mentioning things like "sinful marriage" and "skipping the merry way". It's possible that the group's dynamics influenced her change in position/attitude, but I also wonder if the majority's pro-neuroscience stance had an intimidating effect on her. I'm not entirely certain. Regardless, I find myself conflicted and unsure about where I stand in regard to her newfound beliefs.
Dedicating a whole year for neuroscience is unfair?		
Psychology is a pseudo-science?		
Psychology pretend to be scientific?		
Psychology does not use science in-depth.		
Psychology is a jack of all science trade master of none?		

Appendix N

An example of interpreted dynamics and interactions

Dynamic and interpretations group1	Comments
Agreeableness	
- Justification as a response to a potential judgement? Not sure what this means as a code	
- Expressed openness towards changing opinions on neuroscience.	
- Hesitation in using words .	
- Consolidation of the idea with an example.	
- Tentativeness and hesitancy about what?.	
- Hesitancy around the knowledge.	
- Agreement with the previous participant. Is this a code	
- Emotional thinking. Where?	
Agreement with Amara.	
Absence of hesitancy.	
The use of 'we' and 'I' as a navigation between collectivism and individuality.	
Emotional tendresse towards the medical model/neuroscience. Where is this here?	
Emotional thinking.	
Nuanced narrative.	
The highlight of the subjectivity in expressing an opinion.	
A contrasting view .	
A precipitated need to express a non-agreement.	
A disagreement on the similarity between neuroscience and the humanistic trance .	
The expressed need of the participant to be understood.	
A disagreement on the importance of neuroscience in CoP.	
A disagreement on the importance of neuroscience in CoP.	
Position on neuroscience expressed tentatively and in a subjective way.	
Harry's answer creating an immediate reaction from many other participants.	
A courteous / friendly exchange.	
A feeling of not making sense.	
A feeling of not making sense. I think you need to clarify what you mean here	It sounds as though the participant is intimidated by the pro neuroscience discourse that dominates the group. When they express themselves they would express the need to know whether they make sense or not.
Agreement with the participant.3rd column	
Justification for not having NK.	
A need to be understood.	
Justification for not having extensive knowledge in neuroscience.	
Superficial consensus.	
The participants are describing the same thing but expressing it through different languages.	Why they are using different language to describe the same instead of listening to each others?
Partial agreement.	
Justification of one's position.	
Tentativeness and hesitancy.	
A disagreement on the importance of neuroscience in CoP.	

Code FG1 | Themes by codes | Themes group1 | **Dynamics** | Obsolete and not matching codes | +

Appendix O

A reflexive note on the initial generation of themes

Initial themes construction: Group 2.

I feel sad, anxious and jittery. I am angry towards my perception of the poverty of my data. Also, I am under the impression to try to fit the codes of Group 2 to the identified themes for Group 1. Why am I keeping them in mind? Braun and Clarke emphasised the normalcy of keeping the themes in mind and suggested taking breaks between specific periods of analysis. Even though I try my best to allow time for breaks, my unconscious work on the thematic themes gives me the impression of having an extraordinary memory of the 60 themes identified for the first group. I also go back in forth between the codes, themes and transcripts. Some codes do not make sense anymore to me. What makes a code change throughout the process of analysis? Am I evolving? I am concerned that my bias towards integration would make me miss essential data. Am I again becoming a positivist creep who is seeking THE Reality and Truth at all costs? The reality that data is telling me something I am unable to see? I am confused and tired. I see themes in my dreams and have nightmares of assessors questioning my rigour regarding the analysis process. Am I overly immersed in data, or not enough? Or is the deadline of the 4th of September giving me the impression of not working enough? I can hear my perfectionism presentation hits when it is the least needed. I shall continue the theme development and refining and share the result for the second group with my supervisor. Let's see what her feedback will look like.

Appendix P

The second map of themes for the three focus groups.

Overarching-themes	Themes	Subthemes	Renamed themes	Focus group
What is neuroscience	Neuroscience is not a trusted field	Neuroscience is impersonal		1
		Neuroscience is scary / Threatening		1
		Neuroscience and counselling psychology are apposite		2
		Neuroscience is dangerous / threatening / not safe/ scary		2
		Neuroscience is impersonal, reductionist and deterministic		3
		Neuroscience is not an evidenced-based field		1
		A perception of neuroscience as complex and reductionist		2
		Uncertainty around what is neuroscience.		2
		CPTs perception of neuroscience as scientific and unecessary		1
		Neuroscience is dangerous		3
		Neuroscience is not evidence-based.		2

		What is neuroscience?		1, 2, 3
	Do we really know about neuroscience: An expressed lack of knowledge on Neuroscience	CPTs lack neuroscience knowledge	CPTs attitudes on their Neuroscience knowledge	2
		Neuroscience knowledge depends on previous interest.		2
		Neuroscience knowledge comes from previous interest and training		3
		CPTs attitudes on their Neuroscience knowledge is tinted with uncertainty and insufficiency		2
		Neuroscience (integration) is important / useful / needed		2
		Expressed interest in neuroscience		2
		Neuroscience underlies psychological interventions		3
	Neuroscience has a lot to offer to CoP	Neuroscience knowledge is helpful and beneficial for CPTs and clients		3
		Neuroscience help makes sense of clients 'lived experience'		3
		Neuroscience helps understand psychological distress and phenomena from a biological perspective		3
		De-demonisation of neuroscience		1, 3
		Neuroscience helps make sense of psychological distress		1

		Neuroscience is interesting		1
				1
		Neuroscience informs the impact of pharmacology on therapy.		1
	?	The perception of CPTs on their neuroscience knowledge	Might be a supertheme	1
	?	CPT's perception on neuroscience as a field	Might be a supertheme	2
On consensus, dissensus and everything in-between (the effect of the focus groups on the attitudes of participants)		Impact of the focus group on CPTs attitude		1
		The focus group influences the attitude of participants from being agaisnt to tentatively considering the integration		3
		The focus group helped gained awareness on the CPTs knowledge of neuroscience		3
		The focus group was eye-opening		3
		Neuroscience help the understanding and treatment of psychological distress		2
		The impact of the focus group on reflecting on CoP values		2

		Is CoP stigmatising diaparate professions?		1
		The perceived rigidity of CoP		2
		CoP training neglects the third-person part of psychology?		3
	CoP's defensiveness might drift it away from what it stands for	CoP (training) is othering and defensive		3
		CoP identity might interfer with the client's best interest		3
		What a holistic CoP should look like?		2
		A similarity between CoP and the medical model in being reductionist and dimissive of contrasting yet helpful perspective		3
On being a CPT identifying with CoP ethos and values		CoP values are rigid		3
		Neuroscience integration topic raises concerns on the commitment of CoP to the scientist-practitioner model.		2
		CoP is / can be / should be / hollistic		1
		CoP identity is evolving towards a probable integration		2
		What is CoP?	What is CoP	2
		A concern around CoP identity in case of integration		2

		The integration topic raised a frustration about the systemic inequality/ injustice of treatment between Counselling psychologists and Clinical psychologists trainees		2
		An inferiority to clinical psychologists trainees as they have more access to neuroscience?		2
	Who are we? An identity crisis	A fear to lose CoP identity is behind the rejection of neuroscience		1
		The CPTS insecurity about the CoP identity underlies the rejection of the integration of neuroscience into CoP		2
		who are we?: on a CoP identity		1
		The comparaison to clinical psychologist trainees underlie a sense of injustice in treatment in the taught course		3
		The desagreement on the values of CoP and their impact on the integration		2
		Perception of CPTs on themselves in relation to the integration topic		2
Integration between the good, the bad, the ugly and the factual	A positive attitude towards integration	Pro neuroscience integration Attitude		1
		A pro-integration attitude and its reasons		2

		Possibility to use neuroscience within the Power Threat Meaning Framework	3
		The necessity of neuroscience usage with specific distresses such as trauma	3
		Integrating neuroscience into CoP is pragmatic	3
		An openness towards integrating N into CoP	3
		We can (should) integrate CoP into neuroscience	2
		It is difficult to make a decision on integrating neuroscience into CoP	2
		The importance of boundary setting in integration	2
		Neuroscience integration could be beneficial on multiple levels	3
		The use of neuroscience in the therapy room should be pragmatically informed by the clients needs	3
		Integrating neuroscience into CoP could be through the scientist-practitioner model	3
			2
		Integrating neuroscience can bridge a gap between CoP and the medical model	3
		The possibility of the co-existance of cop and neuroscience	3
		integrating Neuroscience can bridge the gap between CoP and disparate fields	1
		Neuroscience is missing in CoP	3
		Integrating N into CoP might be aligned with CoP values	3
		A need for CoP to be pluralistic	3
		The integration is not needed	1
		Integrating neuroscience into CoP could be empowering	1

		There are many ways to integrate neuroscience into CoP	1
		integration of N into CoP should be within CPs level of compentence.	1
		Neuroscience has its place in a holistic CoP identity	2
		integrating Neuroscience is pragmatic	1
		Neuroscience can be integrated to CoP training	3
		Neuroscience has its place in CoP	1
		A need for integrating neuroscience knowledge into CoP	1
		A careful openess towards integrating NIBS / neuroscience into CoP	1
		Integration could be transversally useful to CoP	1
		The dangers of rejecting neuroscience	1
		Links between CoP therapeutic work and neuroscience	1
		A need for research on neuroscience and CoP	1
		Integration and its importance in the biopsychosocial model	1
		Neuroscience can be integrated into CoP upon conditions	1
		Integrating neuroscience into CoP should be done upon specific conditions	3
		Neuroscience can be integrated to the therapy room	3
		Neuroscience can be integrated into the CoP holistic framework	3
		There is a multitude of ways to integrate neuroscience into CoP	2
		Neuroscience can be empowering for both clients and CPTs	3

		Neuroscience integration can help CPTS advocate for clients	3
		Neuroscience training is needed within a CoP programme	3
		Openness and flexibility towards integration	2
		An enthousiastic attitude towards integrating neuroscience into CoP	3
		The rejection of neuroscience integration	1
		What is integration?	2
		CoP is not ready to integrate neuroscience in the here-and-now	2
		Integrating N into CoP is not needed.	2
		Integrating N into CoP is threatning	3
		Integrating N into CoP is unnessecary	2
		The rejection of integrating NIBS into CoP	1
		The possible co-existence of neuroscience and CoP	2
		The rejection of neuroscience integration into CoP	2
	A rejecting attitude towards integrating neuroscience into CoP	Raisons for rejecting neuroscience	2
		A tentative rejection of integrating neuroscience into CoP	3
		The integration of N into CoP is sinful	3
		Using neuroscience may create a power unbalance between Clients and CPs	1

		The impossible co-existance of neuroscience and CoP	1
		A culturally related distress cannot not be treated with neuroscience	1
		The strain of integration on CPTs/CP	1
		CPTs perception of integration	1
		integrating Neuroscience into CoP is difficult in the here-and-now	1
		Difference between integration and pluralism	1
		Integration of N into CoP raise concerns about areas of competence.	2
		Neuroscience is already integrated into counselling psychology	1
	Neuroscience is already here!	Neuroscience is already integrated into CoP	2
		Integration exists already!	3
		NK is a pre-requisite to the integration topic	3
	What is needed before the integration?	The importance of the clients' beliefs and attitudes on neuroscience as a pre-requisite to the integration debate	1
		The pre-requisit to integration neuroscience into CoP	2
		Clients should come first when approaching the topic of integration	2

Neuroscience a persona non grata		Neuroscience a persona non grata	1
		Neuroscience a persona non grata	2
		Neuroscience is a persona non grata	3
		The systemic dychotomy between neuroscience and psychology (CoP)?	3
		Neuroscience is stigmatised	3
		Talking about neuroscience feels uncomfortable?	1
		Talking about neuroscience feels uncomfortable?	2
		the educational and professional system created a gap between neuroscience and psychology	1
		The system dichotomy between psychology and neuroscience	2
		Integrating N into CoP is threatening	2
		The stigma of NIBS	1
Orphans		Reasons for attitudes regarding the integration	1
		The similarity and the difference of the philosophical underpinnings of neuroscience and CoP	1
		Attitude on neuroscience might be related to age or generations?	2
		Neuroscience can be used / should be in line with the humanistic CoP values	1
		The philosophical underpinning of psychological distress	1
		a judgemental attitude toward anti-integration positions.	2
		CPTs are interested in neuroscience	3
		Talking on the behalf of clients about neuroscience and therapy	1

		Talking on the behalf of clients about neuroscience and therapy	2
		What is psychology?	1
		CoP is enough	1
		The medical model is needed to work within the NHS	3

Appendix Q

The third map of themes for the three focus groups

Overarching-themes	Themes	Subthemes	Renamed themes	Focus group
What is neuroscience	Neuroscience a persona non grata	Neuroscience is impersonal		1
		Neuroscience is scary / Threatening / dangerous		1,3
		Neuroscience and counselling psychology are apposite		2
		Neuroscience is impersonal, reductionist and deterministic		3
		Neuroscience is not an evidenced-based field		1
		A perception of neuroscience as complex and reductionist		2
		Uncertainty around what is neuroscience.		2
		CPTs perception of neuroscience as scientific and unecessary		1
		Neuroscience is not evidence-based.		2
		What is neuroscience?		1, 2, 3

		Neuroscience a persona non grata		1,2,3
		The systemic dychotomy between neuroscience and psychology (CoP)?		1,2,3
		Neuroscience is stigmatised		3
		Talking about neuroscience feels uncomfortable?		1,2
		The stigma of NIBS		1
	Do we really know about neuroscience: An expressed lack of knowledge on Neuroscience	CPTs lack neuroscience knowledge	CPTs attitudes on their Neuroscience knowledge	1,2
		Neuroscience knowledge depends on previous interest.		2
		Neuroscience knowledge comes from previous interest and training		3
		CPTs attitudes on their Neuroscience knowledge is tinted with uncertainty and insufficiency		2
	Neuroscience has a lot to offer to CoP	Neuroscience (integration) is important / useful / needed		2
		Expressed interest in neuroscience		2
		Neuroscience underlies psychological interventions		3
		Neuroscience knowledge is helpful and beneficial for CPTs and clients		3
		Neuroscience help makes sense of clients 'lived experience'		3

		Neuroscience helps understand psychological distress and phenomena from a biological perspective		3
		De-demonisation of neuroscience		1, 3
		Neuroscience helps make sense of psychological distress		1
		Neuroscience is interesting		1
		Neuroscience is useful / important / relevant to CPTs work		1
		Neuroscience informs the impact of pharmacology on therapy.		1
Integration between the good, the bad, the ugly and the factual	A positive attitude towards integration	Pro neuroscience integration Attitude and is reasons		1,2
		Possibility to use neuroscience within the Power Threat Meaning Framework		3
		An openness and flexibility towards integrating N into CoP		2,3
		We can (should) integrate CoP into neuroscience		2
		The importance of boundary setting in integration		2
		Neuroscience integration could be beneficial on multiple levels		3
		The use of neuroscience in the therapy room should be pragmatically informed by the clients needs		3
		Integrating neuroscience into CoP could be through the scientist-practitioner model / A need for research on neuroscience and CoP		1,3

		Integrating N into CoP is (can be) pragmatic		1,2,3
		The possibility of the co-existance of cop and neuroscience		2,3
		integrating Neuroscience can bridge the gap between CoP and disparate fields		1,3
		Neuroscience is missing in CoP		3
		Integrating N into CoP might be aligned with CoP values		3
		A need for CoP to be pluralistic		3
		Integrating neuroscience into CoP could be empowering		1
		There are many ways to integrate neuroscience into CoP (Integration could be transversally useful to CoP)		1
		integration of N into CoP should be within CPs level of compentence.		1
		Neuroscience can be integrated to CoP training		3
		Neuroscience has its place in CoP		1
		A need for integrating neuroscience knowledge into CoP		1
		A careful openess towards integrating NIBS / neuroscience into CoP		1
		The dangers of rejecting neuroscience		1
		Links between CoP therapeutic work and neuroscience		1
		Integration and its importance in the biopsychosocial model		1
		Neuroscience can be integrated into CoP upon conditions		1,3

		Neuroscience can be integrated to the therapy room		3
		Neuroscience can be integrated into the CoP holistic framework		2,3
		There is a multitude of ways to integrate neuroscience into CoP		2
		Neuroscience can be empowering for both clients and CPTs		3
		Neuroscience integration can help CPTS advocate for clients		3
		Neuroscience training is needed within a CoP programme		3
		The medical model is needed to work within the NHS		3
		An enthousiastic attitude towards integrating neuroscience into CoP		3
	A rejecting attitude towards integrating neuroscience into CoP	CoP is not ready to integrate neuroscience in the here-and-now / integrating Neuroscience into CoP is difficult in the here-and-now		1,2
		Integrating N into CoP is not needed.		1, 2
		Integrating neuroscience into CoP is threatening		2,3
		Integrating N into CoP is unnessecary		2
		The rejection of neuroscience integration into CoP		1, 2
		A lack of neuroscience knowledge is related to rejecting integration.		2
		A tentative rejection of integrating neuroscience into CoP		3

		The integration of N into CoP is sinful		3
		Using neuroscience may create a power unbalance between Clients and CPs		1
		The impossible co-existance of neuroscience and CoP		1
		A culturally related distress cannot not be treated with neuroscience		1
		The strain of integration on CPTs/CP		1
		Integration of N into CoP raise concerns about areas of competence.		2
		CoP is enough		1
	Neuroscience is already here!	Neuroscience is already integrated into counselling psychology		1,2,3
		The neuroscience usage with specific distresses such as trauma		3
	What is needed before the integration?	NK is a pre-requisite to the integration topic		3
		What is integration?		
		CPTs perception of integration		1
		The importance of the clients' beliefs and attitudes on neuroscience as a pre-requisite to the integration debate		1
		The pre-requisit to integration neuroscience into CoP		2
		Clients should come first when approaching the topic of integration		2
	CoP's defensiveness might drift it away from what it stands for	Is CoP stigmatising diaparate professions?		1

On being a CPT identifying with CoP ethos and values		The perceived rigidity of CoP		2
		CoP training neglects the third-person part of psychology?		3
		CoP (training) is othering and defensive		3
		CoP identity might interfer with the client's best interest		3
		What a holistic CoP should look like?		2
		A similarity between CoP and the medical model in being reductionist and dimissive of contrasting yet helpful perspective		3
		CoP values are rigid		3
		Neuroscience integration topic raises concerns on the commitment of CoP to the scientist-practitioner model.		2
		CoP is / can be / should be / hollistic		1
		CoP identity is evolving towards a probable integration		2
		What is CoP?	What is CoP	2
		A concern around CoP identity in case of integration		2
		The evolving CoP identity throughout generations.		2
	Who are we? An identity crisis	The integration topic raised a frustration about the systemic inequality/ injustice of treatment between Counselling psychologists and Clinical psychologists trainess		2
		An inferiority to clinical psychologists trainees as they have more access to neuroscience?		2

		A fear to lose CoP identity is behind the rejection of neuroscience		1
		The CPTS insecurity about the CoP identity underlies the rejection of the integration of neuroscience into CoP		2
		who are we?: on a CoP identity		1
		The comparaison to clinical psychologist trainees underlies a sense of injustice in treatment in the taught course		2
		The desagreement on the values of CoP and their impact on the integration		2
		Perception of CPTs on themselves in relation to the integration topic		2
On consensus, dissensus and everything in-between (the effect of the focus groups on the attitudes of participants)		Impact of the focus group on CPTs attitude		1
		The focus group influences the attitude of participants from being agaisnt to tentatively considering the integration		3
		The focus group helped gained awareness on the CPTs knowledge of neuroscience		3
		The focus group was eye-opening		3
		Neuroscience help the understanding and treatment of psychological distress		2
		The impact of the focus group on reflecting on CoP values		2

Orphans	Reasons for attitudes regarding the integration		1
	The similarity and the difference of the philosophical underpinnings of neuroscience and CoP		1
	Neuroscience can be used / should be in line with the humanistic CoP values		1
	The philosophical underpinning of psychological distress		1
	a judgemental attitude toward anti-integration positions.		2
	CPTs are interested in neuroscience		3
	Talking on the behalf of clients about neuroscience and therapy		1,2
	What is psychology?		1
	It is difficult to make a decision on integrating neuroscience into CoP		2
	Difference between integration and pluralism		1

Appendix R

A first attempt for a final mapping

Overeaching-themes	Themes
What is neuroscience	Neuroscience a persona non grata
	Do we really know about neuroscience: An expressed lack of knowledge on Neuroscience
	Neuroscience has a lot to offer to CoP
Integration between the good, the bad, the ugly and the factual	A positive attitude towards integration
	A rejecting attitude towards integrating neuroscience into CoP
	Neuroscience is already here!

	What is needed before the integration?
On being a CPT identifying with CoP ethos and values	CoP's defensiveness might drift it away from what it stands for
	Who are we? An identity crisis
On consensus, dissensus and everything in-between (the effect of the focus groups on the attitudes of participants)	
Orphans	

Appendix S

The final map before the renaming process

Overarching-themes	Themes
Attitudes on neuroscience	Do we really know about neuroscience: An expressed lack of knowledge on Neuroscience
	Neuroscience: a persona non grata
	Neuroscience has a lot to offer
Integration between the good, the bad, the ugly and the factual	A positive attitude towards integration
	A rejecting attitude towards integrating neuroscience into CoP
	Neuroscience is already here: Let's name the elephant in the room!
	What is needed before the integration?
On being a CPT and identifying with CoP ethos and values	CoP's defensiveness might drift us away from what it stands for
	Who are we? An identity crisis

Appendix T

Ethical Approval

University of East London

School of Psychology Ethics Committee

NOTICE OF ETHICS REVIEW DECISION LETTER

For research involving human participants
BSc/MSc/MA/Professional Doctorates in Clinical, Counselling and Educational Psychology

Reviewer: Please complete sections in blue | Student: Please complete/read sections in orange

Details	
Reviewer:	**Elley Wakui**
Supervisor:	**Sharon Cahill**
Student:	**Sarah Yousra Philippon Majdoul**
Course:	**Prof Doc Counselling**
Title of proposed study:	**The Attitudes of Counselling Psychologists Trainees (CPT) on Integrating Neuroscience into Counselling Psychology.**

Checklist (Optional)			
	YES	**NO**	**N/A**
Concerns regarding study aims (e.g., ethically/morally questionable, unsuitable topic area for level of study, etc.)	☐	☐	☐
Detailed account of participants, including inclusion and exclusion criteria	☐	☐	☐
Concerns regarding participants/target sample	☐	☐	☐
Detailed account of recruitment strategy	☐	☐	☐
Concerns regarding recruitment strategy	☐	☐	☐

All relevant study materials attached (e.g., freely available questionnaires, interview schedules, tests, etc.)	☐	☐	☐
Study materials (e.g., questionnaires, tests, etc.) are appropriate for target sample	☐	☐	☐
Clear and detailed outline of data collection	☐	☐	☐
Data collection appropriate for target sample	☐	☐	☐
If deception being used, rationale provided, and appropriate steps followed to communicate study aims at a later point	☐	☐	☐
If data collection is not anonymous, appropriate steps taken at later stages to ensure participant anonymity (e.g., data analysis, dissemination, etc.) – anonymisation, pseudonymisation	☐	☐	☐
Concerns regarding data storage (e.g., location, type of data, etc.)	☐	☐	☐
Concerns regarding data sharing (e.g., who will have access and how)	☐	☐	☐
Concerns regarding data retention (e.g., unspecified length of time, unclear why data will be retained/who will have access/where stored)	☐	☐	☐
If required, General Risk Assessment form attached	☐	☐	☐
Any physical/psychological risks/burdens to participants have been sufficiently considered and appropriate attempts will be made to minimise	☐	☐	☐
Any physical/psychological risks to the researcher have been sufficiently considered and appropriate attempts will be made to minimise	☐	☐	☐
If required, Country-Specific Risk Assessment form attached	☐	☐	☐
If required, a DBS or equivalent certificate number/information provided	☐	☐	☐
If required, permissions from recruiting organisations attached (e.g., school, charity organisation, etc.)	☐	☐	☐
All relevant information included in the participant information sheet (PIS)	☐	☐	☐
Information in the PIS is study specific	☐	☐	☐
Language used in the PIS is appropriate for the target audience	☐	☐	☐
All issues specific to the study are covered in the consent form	☐	☐	☐
Language used in the consent form is appropriate for the target audience	☐	☐	☐
All necessary information included in the participant debrief sheet	☐	☐	☐
Language used in the debrief sheet is appropriate for the target audience	☐	☐	☐
Study advertisement included	☐	☐	☐
Content of study advertisement is appropriate (e.g., researcher's personal contact details are not shared, appropriate language/visual material used, etc.)	☐	☐	☐

Decision options	
APPROVED	**Ethics approval for the above-named research study has been granted from the date of approval (see end of this notice), to the date it is submitted for assessment.**
APPROVED - BUT MINOR AMENDMENTS	**In this circumstance, the student must confirm with their supervisor that all minor amendments have been made before the research**

ARE REQUIRED BEFORE THE RESEARCH COMMENCES	**commences. Students are to do this by filling in the confirmation box at the end of this form once all amendments have been attended to and emailing a copy of this decision notice to the supervisor. The supervisor will then forward the student's confirmation to the School for its records.** **Minor amendments guidance: typically involve clarifying/amending information presented to participants (e.g., in the PIS, instructions), further detailing of how data will be securely handled/stored, and/or ensuring consistency in information presented across materials.**
NOT APPROVED - MAJOR AMENDMENTS AND RE-SUBMISSION REQUIRED	**In this circumstance, a revised ethics application must be submitted and approved before any research takes place. The revised application will be reviewed by the same reviewer. If in doubt, students should ask their supervisor for support in revising their ethics application.** **Major amendments guidance: typically insufficient information has been provided, insufficient consideration given to several key aspects, there are serious concerns regarding any aspect of the project, and/or serious concerns in the candidate's ability to ethically, safely and sensitively execute the study.**

Decision on the above-named proposed research study	
Please indicate the decision:	**APPROVED**

Minor amendments
Please clearly detail the amendments the student is required to make
4.1. only a slight quibble, but not quite anonymised at source if audio recordings are kept -are they deleted upon transcription? Please clarify (also in the invitation letter). 5.1. Any possibility of fear of evaluation during the focus group? Possibly covered by opportunity to debrief individually?

Major amendments
Please clearly detail the amendments the student is required to make

Assessment of risk to researcher		
Has an adequate risk assessment been offered in the application form?	**YES** ☒	**NO** ☐
	If no, please request resubmission with an adequate risk assessment.	
If the proposed research could expose the researcher to any kind of emotional, physical or health and safety hazard, please rate the degree of risk:		
HIGH	**Please do not approve a high-risk application. Travel to countries/provinces/areas deemed to be high risk should not be permitted and an application not be approved on this basis. If unsure, please refer to the Chair of Ethics.**	☐
MEDIUM	**Approve but include appropriate recommendations in the below box.**	☐
LOW	**Approve and if necessary, include any recommendations in the below box.**	☒
Reviewer recommendations in relation to risk (if any):	**Please insert any recommendations**	

Reviewer's signature

Reviewer: **(Typed name to act as signature)**	**Elley Wakui**
Date:	**12/08/2022**
This reviewer has assessed the ethics application for the named research study on behalf of the School of Psychology Ethics Committee	
RESEARCHER PLEASE NOTE **For the researcher and participants involved in the above-named study to be covered by UEL's Insurance, prior ethics approval from the School of Psychology (acting on behalf of the UEL Ethics Committee), and confirmation from students where minor amendments were required, must be obtained before any research takes place.** **For a copy of UEL's Personal Accident & Travel Insurance Policy, please see the Ethics Folder in the Psychology Noticeboard.**	

Confirmation of minor amendments **(Student to complete)**	
I have noted and made all the required minor amendments, as stated above, before starting my research and collecting data	
Student name: **(Typed name to act as signature)**	**Yousra Sarah Majdoul Philippon**
Student number:	**U1709155**
Date:	**18/08/2022**
Please submit a copy of this decision letter to your supervisor with this box completed if minor amendments to your ethics application are required	

Appendix U

Ethical approval of amendments

School of Psychology Ethics Committee

REQUEST FOR AMENDMENT TO AN ETHICS APPLICATION

For BSc, MSc/MA and taught Professional Doctorate students

Please complete this form if you are requesting approval for proposed amendment(s) to an ethics application that has been approved by the School of Psychology

Note that approval must be given for significant change to research procedure that impact on ethical protocol. If you are not sure as to whether your proposed amendment warrants approval, consult your supervisor or contact Dr Trishna Patel (Chair of the School Research Ethics Committee).

How to complete and submit the request	
1	Complete the request form electronically.
2	Type your name in the 'student's signature' section (page 2).
3	When submitting this request form, ensure that all necessary documents are attached (see below).
4	Using your UEL email address, email the completed request form along with associated documents to Dr Trishna Patel: t.patel@uel.ac.uk
5	Your request form will be returned to you via your UEL email address with the reviewer's decision box completed. Keep a copy of the approval to submit with your dissertation.
6	Recruitment and data collection are not to commence until your proposed amendment has been approved.

Required documents	
A copy of your previously approved ethics application with proposed amendment(s) added with track changes.	YES ☒

Copies of updated documents that may relate to your proposed amendment(s). For example, an updated recruitment notice, updated participant information sheet, updated consent form, etc.	**YES ☒**
A copy of the approval of your initial ethics application.	**YES ☒**

Details	
Name of applicant:	**Sarah Yousra Philippon Majdoul**
Programme of study:	**Prof Doc Counselling Psychology**
Title of research:	**The Attitudes of Counselling Psychologists Trainees (CPT) on Integrating Neuroscience into Counselling Psychology.**
Name of supervisor:	**Dr Sharon Cahill**

Proposed amendment(s)	
Briefly outline the nature of your proposed amendment(s) and associated rationale(s) in the boxes below	
Proposed amendment	**Rationale**
Adding two universities to the list of universities where data collection (focus groups) will be conducted.	**The research topic requires a broader range of participants to ensure the heterogeneity of the sample. It is unlikely that CPTs from only one university could capture and represent the attitudes of CPTs on the topic of integration. Accordingly, the City University of London and Regent's University were contacted to request the recruitment of trainees on their campuses. They have given their written consent (see Appendices E and F in the Ethics application form).**
Proposed amendment	**Rationale for proposed amendment**
Proposed amendment	**Rationale for proposed amendment**
Proposed amendment	**Rationale for proposed amendment**

Confirmation

Is your supervisor aware of your proposed amendment(s) and have they agreed to these changes?	YES ☒	NO ☐

Student's signature	
Student: (Typed name to act as signature)	SARAH YOUSRA PHILIPPON MAJDOUL
Date:	21/09/2022

Reviewer's decision		
Amendment(s) approved:	YES ☒	NO ☐
Comments:	Please enter any further comments here	
Reviewer: (Typed name to act as signature)	Trishna Patel	
Date:	23/09/2022	

Change of title request

School of Psychology Ethics Committee

REQUEST FOR TITLE CHANGE TO AN ETHICS APPLICATION

For BSc, MSc/MA and taught Professional Doctorate students

Please complete this form if you are requesting approval for a proposed title change to an ethics application that has been approved by the School of Psychology

By applying for a change of title request, you confirm that in doing so, the process by which you have collected your data/conducted your research has not changed or deviated from your original ethics approval. If either of these have changed, then you are required to complete an 'Ethics Application Amendment Form'.

How to complete and submit the request	
1	Complete the request form electronically.
2	Type your name in the 'student's signature' section (page 2).
3	Using your UEL email address, email the completed request form along with associated documents to Dr Jérémy Lemoine (School Research Ethics Committee Member): j.lemoine@uel.ac.uk
4	Your request form will be returned to you via your UEL email address with the reviewer's decision box completed. Keep a copy of the approval to submit with your dissertation.

Required documents	
A copy of the approval of your initial ethics application.	**YES** ☒

Details	
Name of applicant:	Sarah Yousra Philippon Majdoul
Programme of study:	Prof Doc Counselling Psychology
Title of research:	The Attitudes of Counselling Psychologists Trainees (CPT) on Integrating Neuroscience into Counselling Psychology (CoP).

Name of supervisor:	Prof Rachel Tribe

Proposed title change

Briefly outline the nature of your proposed title change in the boxes below

Old title:	The Attitudes of Counselling Psychologists Trainees (CPT) on Integrating Neuroscience into Counselling Psychology.
New title:	The Attitudes of Counselling Psychologist Trainees (CPTs) on Integrating Neuroscience into Counselling Psychology (CoP).
Rationale:	The title on PhD manager does not match the title on the ethical approval.

Confirmation

Is your supervisor aware of your proposed change of title and in agreement with it?	**YES** ☒	**NO** ☐
Does your change of title impact the process of how you collected your data/conducted your research?	**YES** ☐	**NO** ☒

Student's signature

Student: (Typed name to act as signature)	SARAH YOUSRA PHILIPPON MAJDOUL
Date:	**04/04/2024**

Reviewer's decision

Title change approved:	**YES** ☒	**NO** ☐
Comments:	**There was a mismatch between titles. The title change will not impact the process of how the data are collected or how the research is conducted.**	
Reviewer: (Typed name to act as signature)	**Dr Jérémy Lemoine**	
Date:		

Appendix V

Neuroscience has a lot to offer

This is the third theme of the first overarching theme, ‘Attitudes towards neuroscience’. Eight participants contributed to developing this theme. The theme captured various facets. The most relevant were the importance and usefulness of neuroscience and its relevance to CPTs’ work. I also perceived an attempt at the *de-demonisation* of neuroscience amongst participants who previously expressed enthusiasm towards this field.

On the importance of neuroscience, some participants seemed to compose a coherent argument that combined a flexible, pragmatic approach to emphasise neuroscience's usefulness. They also highlighted its valuable help in understanding the impact of other interacting factors with therapy, such as pharmacology.

For instance, Grace would expose neuroscience's *inspiring* argument and its relevance to the biopsychosocial model when she says:

> “Like neuroscience as a biological, psychosocial, cultural, also looking at the social justice. So I think if we can, that's why even when I read the title in neuroscience in psychodynamic therapy and stuff and that I haven't read it just from the title, it inspired us. I felt, oh yeah, that's interesting Cause I'm, I'm going to be able to incorporate everything in therapy so not just look at one aspect. Flexibility for me is important. I'm flexible so I can use any approach that will suit my clients' needs. So it's good to take into account all those factors. Including neuroscience.” FG1: 68-77

Grace seemed to stress the relevance of neuroscience to therapy through a flexible lens. She highlighted how neuroscience can help complement the CoP perspective on therapy with the biological component that is as important as the psychosocial and cultural factors. Accordingly, this position may suggest the important role that neuroscience can play within CoP.

On the importance of neuroscience, Lucianna stressed the role that the brain plays in understanding human psychology and linked it once again to the medical model

> “as counselling psychologists or as trainees we are expected to and told to focus on the context, social experiences and so on. I don't think there's enough emphasis on the brain which is literally inside us and we don't know much about it as as even scientists, there's so much more that's left to discover. But it does play a role and I don't think it can be discounted or.. There are criticisms of the medical model of course, but I still don't feel like it doesn't have any merit” (FG1: 53-61)

Lucianna seemed to lean towards the importance of the medical model stance, which might explain what might appear to be a less nuanced and emotionally driven opinion. This

was apparent from my perspective with her use of the verb “to feel” instead of “to think” and transpired a position based on a feeling where she advanced that neuroscience can offer the biological account of psychological distress that often seems “discounted” in CPTs work, which also suggest her belief of the relevance of neuroscience in CoP.

On the other hand, Amara emphasised the importance of neuroscience through the understanding of the impact of pharmacology on the brain and its influence and interference with human psychological states and therapy.

> “[…] when we think about […] writing process reports, case studies, they always ask you to specify if clients are taking antidepressants, if they're on any meds. And whenever I get a client who is taking medication and do my own research and sometimes I feel like I'm [lacking] of knowledge of addressing what does it mean to take medication for the client, how does that impact his brain? How does it impact the way the client relates to me as well during therapy and what does it happen if they stop medication, is there anything that is going on there? And that's why I feel like sometimes it's taken for granted that we know and I wish we were more lectures as well about more reading.” (FG1: 112-123)

Through rhetorical questions, it appears that Amara expressed the implicit and “taken for granted” importance of neuroscience in CoP training through subtle information that are required while undertaking assessments based on reporting the use of pharmacology and its impact on the therapeutic relationship. She also appears to explain how her neuroscience knowledge helped draw inferences, build interpretations, and form hypotheses that account for the presence of pharmacology or the impact of brain injuries when working with clients

who have brain injuries or take antidepressants. Furthermore, Amara showed how framing the existence of pharmacology can be beneficial to the work of CPTs.

Another prevalent facet seemed to be an attempt to *de-demonisation* of neuroscience by some participants. This facet took several forms such as neuroscience should not be perceived as a tool to empower the medical model, nor should it be considered a threat to the identity of CoP. Instead, participants seemed to advocate for the use of neuroscience as an objective tool in therapy and highlighted its relevance to the work of CPTs.

Thomas' attitude from FG3 on this facet seemed to claim that neuroscience does not aim to empower the medical model and appeared to advocate for a change within the CPTs population of the relationship that they have with neuroscience in an attempt of *de-demonising* it when he says:

> "I […] think there are things […] we take for granted because I think we're so quick in this society just to, okay, you have this, take this medication, we'll deal with it. And I think […] we can't really treat it [as] a physical illness cause they're two completely separate things. […] we know with trauma victims, the brain has been altered […]. So the brain has to make very quick decisions to respond in a way that it believes will protect [the] person [who is experiencing trauma]. And […] know […] that everything that we do […] came about out of a place to try and protect us from something. The brain has thought, this is what I need to keep this person safe. […] And I wonder where things, spirituality as well, it's like if someone's at that lowest point of the low and all they have is okay, I believe I have my God and my God is going to see me through, what is that even doing to the mind, to the brain, to the function of the brain? If that person did not have that, would the brain look different? Would they be experiencing whatever label we want to give it, schizophrenia, or whatever else? […] And I think we need to tap into those things [understanding the impact of spirituality] on the brain a little bit more than just, okay, you have if appears to be psychosis, schizophrenia, give him dopamine […] [I] just feel like we need to look at alternative things." (FG3: 427-479)

Thomas' narrative encompassed a multitude of meanings that would imply the importance of reframing the relationship that CPTs have as practitioners and researchers with the brain and neuroscience. It appears that neuroscience is not limited to the medical model. It is to be "looked at" from an "alternative" perspective that reinforces human understanding of phenomena such as trauma from the evolutionary perspective and the importance of coping mechanisms such as spirituality and its impact on a brain that underwent trauma. Accordingly, Thomas seemed to want to draw a clear separation between what seems to be

the dismissive reductionist aspect of the medical model and the empowering usefulness and importance of neuroscience as a valuable tool to the work of CPTs.

A similar attitude was expressed when Juan highlighted the usefulness of neuroscience and how the word of *neuroscience* is not an antonym to the subjective and intersubjective perspective that CPTs should adopt when working with a particular population of clients when he claimed:

> "[…] [Neuroscience] doesn't take into account individual and kind of nuance and your interactions. But yeah, I have an example from clinical work. I was working with someone who had a traumatic brain injury and it was useful to have a very basic understanding of how that might present in the clinical work, how he might be. You know, and not even for him to understand cuz he couldn't. But it was important for me to understand to then adapt my practice but also holding in mind that he's an individual and all that." (FG1: 246-255)

Accordingly, Juan stressed how the impersonal and objective aspect of neuroscience should not be an argument to criticise it. He also seemed to advance the view that neuroscience knowledge does not hinder the CPTs' consideration of the client as a unique individual, which might suggest that neuroscience is not a threat to CoP's humanistic values in clinical work and might be a valuable ally in understanding biological aspects that can complement CoP's subjective approach to psychological therapy with a population of clients who present with neuropsychological issues.

To summarise, the theme discussed the usefulness and importance of neuroscience as a tool in the work of CPTs, especially in the context of clients with neuropsychological

issues. The dominating attitude towards neuroscience appeared to be accepting and seemed to acknowledge the various ways in which neuroscience can be useful. Additionally, there seemed to be a desire to reframe the objective and impersonal aspects of neuroscience as important characteristics. It was also recognised that neuroscience does not hinder the consideration of clients as unique individuals and can, on the contrary, complement the approach of CoP humanistic values in clinical work.

Appendix W

What is needed before the integration?

Thirteen participants contributed to the current theme. At first, the participants seemed to attempt to make sense of what integration meant to them, which appeared to be a form of a pre-requisite needed before considering the topic of integration. This facet seemed to be induced through the answer of one of the FG interview questions: 'What does integration mean to you?'. To answer this question participants described their perspective on integration. While Harry FG1 described the importance of integration to be "flawless" (FG1: 621), Amara FG1 highlighted how "integration would mean the best of both worlds" (FG1: 598).

Additionally, participants seemed to reach a consensus on what should precede integration regarding the importance of knowing about neuroscience for the decision on the integration needs to be informed.

In his interaction with Imane's narrative about how counselling psychology and neuroscience do not seem to fit and might not be imagined in an integration, Thomas from FG3 reflected on what may be needed before considering the integration:

> "But I do feel in some ways that even if as Counselling Psychology may not agree with a particular stance, I feel like we'd need to have […] more of an awareness of what these things are. So when we find ourselves in certain spaces, then at least we have that even foundational knowledge about the brain and medications […] I was like okay well we then find a way of if we realize it's important, we find a way of integrating it somehow into what it is that we're doing." (FG3: 243-257)

Thomas seemed to claim that introducing neuroscience into the CoP training is a prerequisite to the debate on integration. It sounds as though Thomas does not consider adding neuroscience to the CoP curriculum as an integration. He considered it as a pre-requisite, which might contrast with other narratives highlighted in previous themes where the addition of neuroscience knowledge into the DCoP training is a means and a form of integration instead of being a pre-requisite that can help make an informed decision about whether CPTs would integrate neuroscience to their work or not.

Imane from FG3 appeared to share a similar position when she said:

> "[…], it's good. It's good to be informed about what you oppose or what you don't know or you don't understand. It's good to know what it is if you're going to take a stance against it, at least know what it is before you take a stance." (FG3: 183-257)

Imane used the expression "It's good" three times in a short intervention, which may suggest a use of repetition as a figure of speech to emphasise the importance of neuroscience knowledge prior to making a decision about whether it should be integrated or not, even though her narrative seems to transpire an already rejecting position against the integration.

Accordingly, as Trevor FG2 expressed it, we “have to have a good understanding of how the brain works” (FG2: 586-587), “A good understanding and the good training” (FG2: 593).

Lucianna from FG1 adopted the same position when she described the importance of prior knowledge as a prerequisite for deciding whether to integrate neuroscience into CoP or not. She asserted the following:

> “But also first giving us enough information about it from both sides and then let us criticize it. What I have felt is that we've gotten enough information about other approaches which are based in the social sciences, which is why we are so much more drawn towards it. But I come from a very medical family, so I have drawn up with these discussions and my master's was in health psychology, so I, yeah, I am anyway, so that has made me more aware of what I'm saying.” (FG1: 652-659)

Lucianna seemed to add a new dimension to the pre-requisite of integration through her suggestion to open a debate around integration, which can be reinforced by prior exposure to and knowledge of neuroscience. She also related the prevalence of social science in CoP is related to better exposure to it as opposed to exposure to quantitative science within the CoP training. She also acknowledged that her preference for neuroscience might stem from her previous academic and personal experiences in the field.

In another vein, other participants identified other needs to consider before approaching the integration. For instance, Angel FG2 specified the importance of the setting of the integration and noted that: “It's a bit kind of depends on the setting that you're integrating it in. Cuz I'm thinking about cuz if you need specific technology or tools to integrate that it's not something you'll be able to do with a client […] [or in a] private

practice" (FG2: 365-368). Accordingly, Angel may imply that integration should be thought about and adapted to whether the client population needs it and whether the service can offer it if it considers integrating tools and technologies, perhaps like bio-feedback, neuro-imaging or NIBS while working with clients, which emphasises the importance of the "setting" as a pre-requisite to the integration.

In summary, it appears that participants recognised the significance of taking into account different requirements prior to contemplating the process of integration. These requirements include having a sound understanding of neuroscience, being aware of the specific needs of the client population, and keeping the core therapeutic focus of the service in mind.