Psychoanalysis in modern mental health practice

Jessica Yakeley

Like any discipline, psychoanalysis has evolved considerably since its inception by Freud over a century ago, and a multitude of different psychoanalytic traditions and schools of theory and practice now exist. However, some of Freud's original ideas, such as the dynamic unconscious, a developmental approach, defence mechanisms, and transference and countertransference remain essential tenets of psychoanalytic thinking to this day. This Review outlines several areas within modern mental health practice in which contemporary adaptations and applications of these psychoanalytic concepts might offer helpful insights and improvements in patient care and management, and concludes with an overview of evidence-based psychoanalytically informed treatments and the links between psychoanalysis, attachment research, and neuroscience.

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Portman Clinic, The Tavistock and Portman NHS Foundation Trust, London, UK
(J Yakeley FRCPsych)

Correspondence to:
Dr Jessica Yakeley, Portman Clinic, The Tavistock and Portman NHS Foundation Trust, London NW3 5NA, UK
jyakeley@tavi-port.nhs.uk

Introduction

Freud's vision for psychoanalysis was ambitious. Psychoanalysis was not merely a mode of treatment, but a metapsychology—a new scientific discipline in its own right—based on its "procedure for the investigation of mental processes that are almost inaccessible in any other way".[1] Although Freud did not discover the unconscious,[2] one of his greatest achievements was to make it the main object of investigation. This unconscious is dynamic, comprised of shifting feelings, fantasies, conflicts, memories, and desires that motivate our conscious thoughts and manifest behaviour, and which can be glimpsed through the window of dreams, but are kept out of consciousness by the force of repression because of their unacceptability to the social, moral, and ethical values of civilised thought. Although its nature has been much debated, the existence of a dynamic unconscious continues to constitute one of the fundamental underpinnings of psychoanalytic theory and practice to this day.

However, Freud's own theories were not always unified, and psychoanalytic theory and practice subsequently evolved into many different psychoanalytic schools and traditions. In the USA, these schools of thought have included the ego psychology school of Heinz Hartmann, influenced by Anna Freud, the self-psychology school of Heinz Kohut, and the object relations theory of Otto Kernberg. In the UK, the works of Melanie Klein and Donald Winnicott have been prominent, with Melanie Klein emphasising the role of innate envy, destructiveness, and primitive unconscious fantasies in early development, and Donald Winnicott the role of the mother and the environment. Their work formed the basis of object relations theory, which expanded Freud's focus on intrapsychic factors and individual autonomy by proposing that development takes place within a relational context, ideas that were further developed by John Bowlby and his seminal work on attachment. Meanwhile, the French psychoanalyst Jacques Lacan developed Freud's earlier theories into his distinctive writings, which have been particularly influential in France and South America. In the 1980s, a number of postmodern schools of thought emerged, such as the relational, intersubjectivist, and constructivist schools, which emphasise the two person nature of psychoanalytic treatment and that knowledge or truth does not belong to the therapist, but is co-constructed during the interaction between patient and therapist.

What relevance does this array of psychoanalytic movements and their theories pose to modern mental health practice? Although in the past 25 years many substantial advances have been made in mental health research and practice—notably in the development of safer and more effective psychotropic drugs and of evidence-based psychological therapies—such achievements can seem overshadowed by the numerous challenges faced by publicly funded mental health services today. These challenges include the following: a shortage of financial investment compared with services for physical health; target cultures encouraging inappropriate incentives; service reconfigurations resulting in fragmentation, poor continuity of care, and disruption of therapeutic relationships; the marginalisation of psychosocial approaches; and high frequency of staff sickness and burnout due to the stresses of working with patients with mental disorders, who might participate in risky behaviour, in inadequately resourced services.

Psychoanalysis does not, of course, offer easy explanations or solutions for these long-standing and complex problems. However, psychoanalytic conceptualisations of human psychological processes and behaviour, psychoanalytically informed developmental theories, and specific applications of psychoanalytic thinking and practice within mental health services could be helpful in complementing other approaches within the field of mental health, in understanding the nature of these difficulties, and in initiating therapeutic change within complex systems of care. This Review explores how key Freudian psychoanalytic concepts, such as unconscious mental processes, a developmental approach to psychopathology, defence mechanisms, transference and countertransference dynamics, and the elaboration of these concepts by subsequent psychoanalytic theorists, could implicitly inform a clinician's day-to-day work within the mental health field, and offer insights and improvements in patient care. The Review concludes with a summary of advances in the development of evidence-based psychoanalytic psychotherapies, and in the interdisciplinary dialogues between

psychoanalysis, attachment studies, developmental research, and neuroscience.

Reclaiming subjectivity in diagnosis and assessment

The development of psychiatry has been strongly influenced by a tradition of positivism and empiricism, an approach advanced most notably in the natural sciences. Positivism promotes a stance of objectivity in which phenomena are accurately defined, externally validated, and reliably applied; by contrast, subjectivity—that of perceptions, interpretation, and individual narratives of past experience—is avoided, because it is unreliable and obscures or distorts how things really are. Challenges to the dominance of the positivistic paradigm have not only come from psychoanalysts, but were also one of the underpinnings of the antipsychiatry movement in the 1960s;[3] however, despite the growing acceptance of the importance of service user involvement—the so-called lived experience and patient voice—the centrality of meaning, elucidation, sensibility, and subjective experience within the therapeutic encounter arguably remain somewhat neglected in modern psychiatric practice.

The psychoanalytic approach is focused on subjective experience, exploring the vagaries and vicissitudes of the human mind, elucidating the patient's internal world—their fantasies, dreams, hopes, feelings, wishes, motivations, anxieties, and defences—both conscious and unconscious. The paradox of the psychoanalytic method is that its therapeutic instrument, unlike the surgeon's scalpel, is identical to the object of its treatment: the interaction of two minds, the emotional distress of the patient contained by the emotional receptivity of the therapist, unconscious communications between the one listening and the other talking. The contents of the unconscious are fundamentally inaccessible, and are only revealed to us through dreams, slips of the tongue, mannerisms, and symptoms. The enigmatic and fleeting nature of the unconscious is at odds with the concrete nature of bodily matter, in which illness can be detected, diagnosed, and treated according to a positivist model of medical science. Symptoms or behaviours represent adaptive distortions hiding unconscious drives, fantasies, conflicts, anxieties, defences, and object relations that are deemed unacceptable, or intolerable, to the conscious mind. Their overt phenomenology is not a basis for classification, as in the diagnostic systems of the DSM or ICD, but represents the manifest indications of underlying psychic conflicts, which become the focus of therapeutic intervention.

Psychoanalysis does not reject the importance of descriptive phenomenology but enhances its subjective perspective by explicitly engaging the patient in the assessment process, and focusing on their individual experiences of their illness. The patient's unique subjective experience, influenced by unconscious forces, acts as a lens through which the determinants of their mental illness shape the nature of their symptoms and behaviours. Phenomenological attention to the structure and form of a symptom is integral to the psychoanalytic conceptualisation of symptomatology in giving clues about its underlying anxieties, conflicts, and defences; however, psychoanalysis goes further in attributing unconscious meaning to the patient's manifest symptoms and behaviours, and proposes that understanding this meaning might help both clinicians and patients within the therapeutic context.

Is there meaning in madness?

The delusional world of patients with psychosis might seem impenetrable to understanding, an attitude that is enshrined in Jaspers'[4] concept of the so-called un-understandable delusions of schizophrenia, and therefore attempts to decipher their meaning can seem futile. Moreover, these patients' concrete communications, lack of affectivity, and poor capacity for symbolic and abstract thinking can inhibit meaningful dialogue, and weaken the responses of mental health professionals tasked with looking after them, whose responses can become as concrete (eg, form filling or administering medication) as those of their patients.[5]

Freud proposed that in neurosis, repression is partly successful, and disturbing thoughts and wishes emerge into consciousness under the guise of symptoms that cause distress, but do not completely destabilise ego functioning.[6] Freud saw psychosis, however, as a failure of repression, which leads to the mind being overwhelmed with disturbing thoughts and feelings arising from the unconscious, and delusions as an attempt to repair a fragmentary inner world by remodelling reality. Subsequently, Klein[7] and Bion[8] developed the idea that the symptoms in themselves do not define psychotic illness, but are defences against underlying anxieties, which cannot be symbolised or consciously reflected on. Lacan[9–11] introduced the idea that psychosis arises from foreclosure, a specific defence mechanism in which the so-called name of the father (or paternal function) is rejected. Lacan proposed that the father plays an essential role in structuring the child's inner world, and does so by intervening in the dyadic relationship between mother and child to facilitate separation by introducing the child to culture, language, social reality, and meaning—the so-called symbolic order. In psychosis, this process has been curtailed or foreclosed, and the individual remains within the so-called imaginary order, in which no meaningful symbolic sense can be made of experience, and psychotic delusions and hallucinations are the result of the individual striving to account for what he or she experiences.

Like Lacan, other psychoanalysts working with psychotic patients in the UK and USA, notably

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Winnicott,[12] Stack Sullivan,[13] and Searles,[14] located the origins of their illness in early environmental deficits and traumas, particularly the very early relationship between mother and infant. However, double bind theory and the notion of the so-called schizophrenogenic mother, who causes her child to become psychotic in the context of contradictory communications within families of individuals with psychosis,[15] made such families feel blamed, and this led to a rejection of the contribution of psychoanalytic thinking to understanding the cause of psychosis in favour of biological explanations. However, evidence suggests that childhood trauma, neglect, and abuse could play a role in the origins and maintenance of psychotic illnesses.[16] A meta-analysis of relevant studies published between 1980 and 2011 found that childhood sexual, emotional, and physical abuse, emotional neglect, bullying, and parental death increased the risk of developing psychosis by almost three times.[17] Individuals who were exposed to trauma and adversity at a younger age or exposed to trauma over a prolonged period were at a higher risk of developing psychosis.[18]

A contemporary psychoanalytic or psychodynamic model of psychosis proposes that environmental events and experiences interact with genetic and biological factors in the context of early attachment relationships to increase a person's vulnerability to psychosis. These interactions alter the developing cognitive-affective schemas concerning relationships that develop between the individual and others, and interfere with the development of the capacity to tolerate emotions, modulate impulses, and mentalise.[19] Psychosis develops when current stresses overwhelm the mind's capacity to bear, reflect on, and integrate painful mental experiences or, from a biological viewpoint, when external factors trigger endogenous and genetic vulnerabilities that alter the structure and functioning of the brain. The impact and experience of current stressors are also determined by their meaning for the individual, which is influenced by previous life experiences.

For example, a mixed-race patient presented with first-onset psychosis following the breakup of a relationship with his white girlfriend. His psychotic symptoms consisted of persecutory delusions of being poisoned by black female nursing staff, and third-person auditory hallucinations accusing him that he was not a real man. In his history, his father had a diagnosis of schizophrenia and left when he was a baby, leaving him in the care of his white mother who repeatedly told him that he was "bad like your black father". Here we might formulate that the rejection from his girlfriend awoke previously repressed unresolved feelings of loss and abandonment towards his father and aggressive feelings towards his mother, which were intolerable to his conscious mind and therefore projected onto other people, and these feelings returned in the form of delusions of being poisoned by maternal figures such as nurses, who are meant to be caring but instead are abusive in the delusion. Moreover, his internal conflicts about his racial and masculine identity, stemming from his early experience of his abusive mother, inform the content of his psychotic symptoms in his delusional mistrust of black female staff, and the voices that undermine his masculinity. His vulnerability to the effect of experiences of loss could be compounded by a genetic predisposition to psychosis, because the patient had a first-degree relative with schizophrenia. From a Lacanian viewpoint, his psychosis had arisen in the context of paternal absence, and without the symbolising function of the so-called name of the father, the patient continued to have psychotic symptoms of persecutory delusions and hallucinations.

The direct interpretation to the patient of the potential unconscious meanings of his psychotic illness is likely to be destabilising to him, and would disrupt the precarious defensive nature of his symptoms, which protect him against unbearable feelings of aggression, humiliation, shame, and loss. However, a shared exploration within the staff group caring for the patient of the unconscious fantasies and fears that might underlie his psychosis could enable them to understand how his previous experiences have shaped the content and meaning of his symptoms, and help the staff to offer compassionate care and containment for a patient who might be rejecting them, without acting on their countertransference feelings of anger and humiliation by rejecting the patient.

Countertransference, defences, and toxic institutions

Countertransference, the correlate of transference, describes the therapist's experiences of the patient, and particularly those that are affective and somatic. Freud[20,21] originally viewed countertransference as an obstacle to therapeutic progress and a manifestation of unresolved conflicts within the analyst. However, later psychoanalysts such as Heimann,[22] Racker,[23] and Sandler[24] highlighted the utility of countertransference as a therapeutic instrument by understanding the patient's contribution to the therapist's countertransference, in which the patient's unwanted feelings are projected into the therapist, who is then made to feel and act in ways that are unfamiliar. This view led to a change in psychoanalytic technique, in which close attention to transference–countertransference dynamics in the therapeutic relationship can give insights into the unconscious and internal object relationships of the patient, which are repeated in their external relationships. More recent conceptualisations of transference and countertransference from intersubjective and relational perspectives emphasise equality and mutuality, whereby unconscious aspects of both the patient and therapist interact and influence each other, and meaning and insight are co-constructed within the therapeutic relationship, rather than via the therapist's objective observations of the patient's projections.[25–27]

Reflection on the countertransferential feelings and reactions professionals have towards their patients can help them to understand how they unconsciously distance and defend themselves from the anxieties that come from working with patients with mental illnesses, by adopting particular attitudes and behaviours. Unacknowledged and unchecked feelings such as anger, therapeutic nihilism, or despair towards difficult patients whom the professionals are managing in tough working environments, in which the expression of emotions is discouraged, could lead staff to unconsciously enact aggressive responses towards their patients, such as unnecessary seclusion, withholding leave, or boundary violations.

Not only do individual clinicians struggle during encounters with their patients' mental illnesses, but on a wider scale the staff group as a whole might also unconsciously use organised pathological group defences, such as ritualised form filling, scheduling frequent meetings, or organising staff rotas, to distance themselves from having any prolonged emotional contact with patients committed to their care. Bion[28] described how latent defensive group cultures, or basic assumptions, can develop as a defence against primitive anxieties of dependence, aggression, and sexuality, and to block the more conscious and manifest work of the staff group.

On the basis of Bion's ideas, and theories of social defence systems,[29,30] Hinshelwood[31] and others have shown how institutional dynamics, and small and large dynamic group processes that occur between staff and patients within institutions, can hinder the effective functioning of the whole organisation. The psychopathology of patients seeps into that of the institution in which they are detained, in a reciprocal exchange of destructive projections and defences between patients who are mentally ill who often engage in risky behaviour, and fragile and demoralised staff, who might have their own unconscious disturbances that become more evident in conditions of stress. Damaging defensive practices used by individual professionals become common practice in the institution where patients are siloed, and the anxieties and tensions between staff and patients might lead to rivalry and splintering within the staff group. Staff who cannot endure the daily emotional stress are more likely to require sick leave or to have burnout; those who stay do so by adopting the same primitive defence mechanisms—such as denial, splitting, and projection—and dysfunctional ways of relating as their patients. The fragmentation of the institution mirrors the fragmented minds of many of the patients, a reflection of lives that might be chaotic and damaged, in which their early experiences of disturbed attachments, loss, abuse, or rejection are repeated by the unconscious enactments of the staff.

Various types of staff groups offering support and supervision, such as reflective practice, case discussion, and Balint groups, are available within mental health services, and provide a space for staff to think about their work with patients and reclaim their focus on good clinical care. However, case discussion groups tend to focus on the diagnosis and formulation and management of specific patients, rather than on the staff's emotional reactions to patients, and how these are enacted at both an individual and systemic level.[32] Moreover, the provision of regular reflective multidisciplinary forums are often difficult to implement in a meaningful and sustained way, and when they are available, they are often not attended by senior staff, and are thought of as a luxury rather than essential to patient care and staff wellbeing. The reluctance of staff to engage in these forums could be because they find it difficult to cultivate and sustain an attitude of awareness and reflection on their emotional responses and how these might influence their work, and find it difficult to develop a capacity for self-reflection and emotional attunement with patients—ie, an attitude of affective subjectivity[33]—because this brings them closer to their own vulnerabilities and limitations. However, by pushing these thoughts out of awareness and repressing them into the unconscious, the ability of staff to relate to patients, enter their subjective world, and contain, understand and reduce the distress of both individual patients and the organisations that look after them is impeded.

Evidence-based psychodynamic psychotherapies

One of the persistent criticisms of the psychoanalytic discipline is that its concepts and treatments lack empirical evidence. Historically, there have been various challenges to undertaking methodologically sound studies of psychoanalytic or psychodynamic therapies, which have undergone little outcome and process research in the field. These challenges include the following: the poor methodology of many existing studies, such as unclearly defined patient samples or treatment methods, absence of adequate controls, and insufficient monitoring of adherence to the treatment model and inter-rater reliability; resistance within the psychoanalytic community to research methods such as the manualisation of treatments, randomisation of patients, recording of therapy sessions, studying of narrowly defined research samples that are not representative of clinical practice, and scepticism within the community as to whether unconscious conflicts, defences, and fantasies can be measured; and, finally, difficulties in investigating longer-term treatments and outcomes.[34]

Although some empirical evidence can be found for the efficacy of psychoanalysis[35–38] for complex mental disorders, most of the studies are not controlled, which limits the interpretation of the results. More robust research has been done on psychodynamic psychotherapies. The terms psychoanalytic psychotherapy and

psychodynamic psychotherapy are often used interchangeably, but psychodynamic therapy is usually considered to be a broader umbrella concept for psychotherapy modalities that have been adapted to different degrees from psychoanalytic principles, are less intensive than treatment with psychoanalysis, and operate on an interpretive–supportive continuum. Many of these modalities were initially developed for treating specific disorders—such as mentalisation-based treatment[39] or transference-focused therapy[40] for borderline personality disorder, cognitive analytic therapy[41,42] for depression, dynamic interpersonal therapy[43] for anxiety and depression, and panic-focused psychodynamic psychotherapy for panic disorder[44]—and some have been subsequently generalised to treat a wider range of conditions. These therapies tend to be time limited, have a clear theoretical basis, and are manualised.

In the past two decades, an increasing number of high-quality individual randomised controlled trials, meta-analyses, and systemic reviews assessing the efficacy of short-term and long-term psychodynamic psychotherapy have been done in a range of mental disorders and have reported effect sizes as large as other evidence-based therapies such as cognitive behavioural therapy (CBT).[45–48] These findings contradict the widespread belief that psychodynamic approaches are short on empirical support, a myth that could reflect the selective dissemination of robust research findings.[49] Corroborated by several meta-analyses, a systemic review[50] of psychodynamic therapy for specific mental disorders identified 64 randomised controlled trials that provide evidence for the efficacy of psychodynamic psychotherapy in common mental health disorders, including depressive and anxiety disorders, eating disorders, complicated grief, somatoform disorders, personality disorders, substance-related disorders, and post-traumatic stress disorder.

Most of these studies investigated short-term psychodynamic psychotherapies (eight to 40 sessions). However, some evidence suggests that long-term psychodynamic psychotherapy (12–36 months) in complex mental disorders is effective. In several meta-analyses, long-term psychodynamic psychotherapy was significantly more effective at improving target problems, general psychiatric symptoms, and personality and social functioning than were shorter or less intensive forms of treatment in patients with complex mental disorders, defined as chronic mental disorders, personality disorders, or multiple comorbid disorders.[51–54] These findings are consistent with data on dose–effect relations, which suggest that for many patients with complex mental disorders, including chronic mental disorders and personality disorders, short-term psychotherapy is not sufficient.[50] Moreover, some evidence indicates that long-term treatments have better longer-term outcomes following cessation of therapy than do short-term treatments,[55] and that effect sizes might not become evident until some time after treatment has ceased, suggesting the need for longer-term follow up.[56]

The previously mentioned findings should be viewed with some caution. Consistent with the so-called dodo effect (ie, the notion that all psychotherapies have equivalent outcomes regardless of their differences),[57,58] the comparison of psychodynamic psychotherapy with active treatments rarely identifies psychodynamic therapy as superior to control interventions, a finding that is usually explained by the real agents of change being common factors—ie, techniques and mechanisms common to all therapies. However, others argue that the dodo effect is due to a failure to measure real differences between different therapies that exist but have eluded detection because current measures are inadequate.[49] Nevertheless, competition between psychotherapies and other types of psychological therapies, especially CBT, is often unhelpful, and efforts would be better focused on defining conceptual similarities and differences in therapeutic paradigms, and identifying which psychological modalities are most appropriate for specific mental disorders within a complex context of treatment efficacy and effectiveness, cost-effectiveness, patient choice, and availability of treatments.

Moreover, a shift has occurred within psychotherapy research, pioneered by researchers in the field of CBT,[59–61] and later those within psychodynamic psychotherapy, from developing manualised approaches focused on single disorders towards transdiagnostic and modular treatments, which focus on similarities among disorders, particularly those in similar classes of diagnoses that are associated with a high risk of comorbidity, such as anxiety disorders.[48] This approach could be particularly suited to psychodynamic psychotherapy, because it is traditionally less tailored to the symptoms of single mental disorders, rather than problems, especially in the relational sphere, that are common to many mental conditions, and promotes a dimensional model of classification focusing on the core underlying processes of mental conditions.

Attachment, developmental research, and neuroscience

The interdisciplinary collaboration between psychoanalysis and attachment research has provided one of the most convincing theoretical frameworks guiding psychodynamic treatment and research today. The notion of attachment stems from the seminal work of the psychoanalyst Bowlby,[62–64] who integrated psychoanalytic ideas with ethology and evolutionary theory to form a model of child development, in which the child's earliest relationships with caregivers lead to the development of internal working models, or cognitive-affective schemas, which guide the child's perceptions, emotions, thoughts, expectations, and relationships in later life. Bowlby's ideas gained empirical validity in subsequent research showing that infants with insecure attachments, caused

by early disruptions in their primary relationships as a result of separation, trauma, or loss, were more likely to experience psychopathology and relationship difficulties in later life;[65,66] furthermore, representations of an adult's attachment experiences have substantial influence on their own children's development and attachment patterns, defining their socioemotional functioning in adulthood.[67]

These findings, based on the direct observation of infants and children in relation to their caregivers, challenge traditional psychoanalytic theories of child development that are based on retrospective inferences from adult psychoanalyses, such as classical Freudian and Kleinian accounts, in which the baby is primarily motivated by drive instincts. In the attachment model, the baby is considered relational from the start: the baby's mind is organised and oriented to the external world and human interaction from birth, and development is motivated by social relationships. Psychoanalytically oriented developmental infant researchers such as Stern,[68] Schore,[69] Lyons-Ruth,[70] and Tronick[71] have shown that the intersubjective relationship between infant and parent is the fundamental unit in which psychological development originates. In this relationship, the mutual processes of non-verbal communications, transmitted via motor activity, affect, and sensation between infant and caregiver, are the core motivators and organisers of experience, and drive the development of affect regulation, impulse control, autonomy, and sense of identity, all of which constitute key elements of the person's emerging personality. Such research affirms some basic assumptions of the psychoanalytic developmental approach, such as the formative role of early life experiences, normal and disrupted development, a person-centred perspective, complexity of development, and a focus on the inner world.[72]

Fonagy and others[73–75] have built on attachment research, and have drawn from psychoanalytic theories of child development, such as those of Winnicott[76] and Bion,[77] to introduce the concept of mentalisation. Mentalisation is an essential and uniquely human psychological process that involves the capacity to reflect and understand the contents and processes of our own and other people's mental states, including thoughts, beliefs, desires, affects, wishes, and intentions, and to be able to interpret our own actions and those of others as meaningful, and based on intentional mental states. In normal development, the capacity to mentalise arises via the intersubjective process of emerging psychological awareness between the child and mother or caregiver, in the context of secure attachment. Disruptions in early attachment, through experiences of trauma, loss, abuse, and neglect, interfere with the normal development of mentalisation, and can lead to personality pathology in adulthood, such that the person's representations of themselves and others are unstable, and affect states are difficult to differentiate and regulate.

These findings from psychoanalytically-informed developmental research have implications for clinical theory and therapeutic action. Psychotherapy can be seen as being associated with the developmental framework of attachment theory, in which the therapist acts as a secure base and temporary attachment figure who helps the patient explore the link between past and current relationships. Within the therapeutic relationship, transference and countertransference can be used to explore changes in the patient's internal working models, to expose how the relationship with the therapist is linked to external relationships, and to provide the opportunity for these working models to shift and adapt, allowing the patient to feel and act in new ways based on current, rather than past, experience.[78] Non-verbal communication, and other implicit relational and affective processes within the intersubjective relationship between patient and therapist, are now recognised as crucial factors in initiating therapeutic change in psychoanalytic psychotherapy, in addition to the traditional mutative role assigned to the patient who gains a conscious insight into their difficulties. Therapeutic techniques are now more directly linked to theories of therapeutic action, and have been systematised into manualised psychodynamic psychotherapies developed for personality disorders and other mental conditions, such as mentalisation-based treatment, which is specifically based within an attachment framework, and in which the therapist's points of view, attitudes, and skills are explicitly directed at increasing the patient's capacity to mentalise.

Finally, a growing number of practitioners and researchers are exploring the interface between psychoanalysis and neuroscience. Prominent psychoanalysts such as Gabbard[79] have explored the neurobiological correlates of psychoanalytic psychotherapy, with implications for diagnosis and treatment. The work of interdisciplinary researchers, such as Damasio,[80] Panksepp,[81] and Solms,[82] highlight the association between affective neuroscience and the psychodynamic domains of emotion and instinctual drive, progress in neuropsychology with the discovery of mirror neurons[83,84] and their links to psychoanalytic conceptualisations of empathy and unconscious communication, and advances in cognitive science in which traditional cognitive modular and computationalist views of the mind are shifting to more complex models of neurocognitive organisation and function, which might be compatible with psychoanalytic models of dynamic mental processes.[85]

Conclusion

Psychoanalytic studies have become more embedded in empirical research and provide increasing evidence for the validity of some psychoanalytic concepts and for the effectiveness of psychoanalytic therapies, findings that are important in ensuring that psychoanalysis and its insights, applications, and treatments survive in a rapidly changing technological society. At the same time, even in

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Search strategy and selection criteria

The articles used for this review were obtained by searching MEDLINE, PubMed, PsycINFO, the PEP Archive, PsychArticles, the Psychology and Behavioural Sciences Collection, and PsychBooks for the key terms "neuropsychoanalysis", "evidence base", and "psychoanalytic psychotherapy", up until Sept 1, 2017. Reference lists in existing reviews and papers, and conference presentations, were also used to find articles for this Review.

the absence of so-called hard data, psychoanalytic models of how the mind is structured and functions could be useful as heuristic methods to engage clinicians' interest in their patients, and to restore meaningful therapeutic contact. Psychoanalytic formulations, which consider the unconscious meaning of the patient's illness, and use concepts such as transference and countertransference, might intuitively make sense to clinicians and their patients, and create a shared lexicon of meaningful dialogue that relieves some of the daily stresses of working with distressed patients in under-resourced mental health environments, and on a larger scale mitigates institutional blindness to lapses in care. The integration of the contemporary instrumentalist approaches of modern medicine with a person-centred psychoanalytic viewpoint that embraces subjectivity, finds meaning in symptoms and behaviour, and tolerates ambiguity and uncertainty, could provide inspiration and hopefulness in our endeavours to further understand and treat the human psyche.

Declaration of interests

I am a psychiatrist working within the UK National Health Service, and a psychoanalyst practicing primarily within a British Contemporary Freudian-oriented framework. I declare no competing interests.

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