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# Clinical and service implications of a cognitive analytic therapy model of psychosis

Ian B. Kerr, Paul B. L. Birkett, Andrew Chanen

Cognitive analytic therapy (CAT) is an integrative, interpersonal model of therapy predicated on a radically social concept of self, developed over recent years in the UK by Anthony Ryle. A CAT-based model of psychotic disorder has been developed much more recently based on encouraging early experience in this area. The model describes and accounts for many psychotic experiences and symptoms in terms of distorted, amplified or muddled enactments of normal or 'neurotic' reciprocal role procedures (RRPs) and of damage at a meta-procedural level to the structures of the self.

Reciprocal role procedures are understood in CAT to represent the outcome of the process of internalization of early, sign-mediated, interpersonal experience and to constitute the basis for all mental activity, normal or otherwise. Enactments of maladaptive RRPs generated by early interpersonal stress are seen in this model to constitute a form of 'internal expressed emotion'. Joint description of these RRPs and their enactments (both internally and externally) and their subsequent revision is central to the practice of CAT during which they are mapped out through written and diagrammatic reformulations.

This model may usefully complement and extend existing approaches, notably recent CBT-based interventions, particularly with 'difficult' patients, and generate meaningful and helpful understandings of these disorders for both patients and their treating teams. We suggest that use of a coherent and robust model such as CAT could have important clinical and service implications in terms of developing and researching models of these disorders as well as for the training of multidisciplinary teams in their effective treatment.

**Key words:** cognitive analytic therapy, psychosis.

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It is generally accepted that treatment of psychotic disorders requires a genuinely integrated biopsychosocial approach given that all such dimensions are relevant to the genesis, course and treatment of this clearly heterogeneous group of disorders [1–4]. Appropriate and effective psychosocial approaches are however, generally more notable for their absence than their implementation in most service settings world-wide, despite the increasing research evidence accruing for their validity, efficacy and user-friendliness. This, in part, reflects the current dominance of a biomedical paradigm [5] and, arguably, in part, the powerful interests of the pharmaceutical industry [2,5]. However, it is clear that there is no one, uniformly effective model of psychological treatment for all forms or aspects of psychotic disorder. We, and others, have previously suggested [6–9] that the recently developed cognitive analytic therapy (CAT) model may have much to offer in this field, both as an integrative model and as a conceptual base for treatment

Ian B. Kerr, Consultant Psychiatrist (Correspondence)

**Community Health Sheffield NHS Trust, Limbrick Centre, Sheffield, S6 2PE, UK. Email: dr.ian.kerr@ukgateway.net**

Paul B. L. Birkett, Clinical Lecturer

**Academic Department of Psychiatry, Longley Centre, Northern General Hospital, Sheffield, UK**

Andrew Chanen, Senior Lecturer

**ORYGEN Research Centre, Department of Psychiatry, University of Melbourne, Melbourne, Australia**

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and, possibly, prevention. This paper offers a preliminary description of the use of CAT in this field including reference to case material to illustrate the use of an integrated and dialogical approach. Some further implications of such a model for services are also explored.

## CAT background

Cognitive analytic therapy is an integrative model of psychotherapy developed over recent years by Ryle [9–11]. The model has aimed to integrate the effective and valid elements of pre-existing models including Kellyian personal construct theory, cognitive and developmental psychology (stressing in particular the intersubjective nature of the human infant [12]) and psychoanalytic object-relations theory. More recently, the CAT model has been further transformed by Vygotskian activity theory [13] and Bakhtinian concepts of the 'dialogic' self [14], which have contributed to the radically social concept of self that now underpins the model. The further psychotherapeutic and political implications of this concept of self are discussed further elsewhere [9]. From this perspective all mental functions are seen as rooted in and highly determined by the outcome of a process of sign-mediated internalization of early interpersonal experiences and their associated social meanings. This process results in a self that is fundamentally constituted by (as opposed to simply representing) interpersonal experience through what are described in CAT as 'reciprocal role procedures'. Thus, all mental processes are seen in the context of a repertoire of 'reciprocal role procedures' (RRPs), enactments of which are understood always to anticipate or elicit the 'role' of literal or historic other(s). A 'role' procedure in CAT is understood to comprise a complex of intention, affect, procedural memory, action and subsequent evaluation, and serves effectively as a 'template' through which events are understood. A role is also understood to be associated with an internalized dialogic 'voice'. These developmental processes of internalization and acquisition of role repertoires have been subject to increasing empirical study and validation in recent years [15].

## The practice of CAT

Cognitive analytic therapy evolved as a time-limited, highly structured therapy with an emphasis on collaboration and active participation by the patient. Early aims of therapy are the joint identification and description of maladaptive procedures and their enactments and consequences. Many of these maladaptive patterns were identified through early process research and described as 'traps', 'snags' and 'dilemmas'. These are described explicitly by means of written and diagrammatic reformulations, the general validity of which has been demonstrated through recent process research [16]. Inevitably the extent to which individual patients or different mental health workers can work with these varies, although the greater majority are able to make good use of them. The written reformulation identifies and describes these problem procedures in the context of an explicit re-telling of, or 'bearing witness' to, the patient's life story while the diagrammatic reformulation aims to depict them in the here and now. The narrative aspect of the written reformulation is seen as highly important and is consistent with the stress laid on this aspect of therapy by various other writers [17–19]. From a Vygotskian perspective these reformulations are seen as psychological 'tools'. They map out the territory for therapy that then focuses on identifying recurrent enactments of maladaptive role procedures (both in the outside world and within the therapy relationship), and attempts to work jointly on revising them. It also provides an opportunity for working through historic issues and making sense of them in the context of a supportive and respectful relationship where nonetheless emphasis is placed on the therapist not colluding with the enactment of historic RRPs that (s)he will recurrently and inevitably be under pressure to do. In the case of more disturbed and damaged patients such as those with severe personality and many psychotic disorders, diagrammatic mapping will also involve the recognition and description of dissociated 'self-states', each of which is seen to embody one RRP. Therapy also aims to help the patient to be able to reflect on these at a meta-procedural (or 'meta-cognitive') level that is normally a particular difficulty in severe personality disorder as well as in psychotic states. Enactment of extreme and disconnected RRPs (e.g. 'neglected' relative to 'idealizing help seeking' or, 'abused' relative to 'abusing "vengeful" anger') in this way often constitutes difficulty for staff attempting to work with such patients. Such difficulty is frequently manifest in staff 'collusion' with, for example, either needy or angry patient enactments leading to possible reciprocal enactment of over-involved or hostile reactions by staff. Further discussion of the concept of the 'difficult' patient is offered elsewhere [9]. Many of these enactments and the occurrence of disconnected self-states are of course prominent in psychotic states for different reasons although they elicit similar, often unhelpful, reactions systemically [6,9].

## Overview of the CAT model of psychosis

### *Vulnerability to psychotic disorders and their subsequent symptomatology*

In the CAT model of development, interpersonal experience, particularly early, is understood to be internalized as a repertoire of RRPs, which given 'good enough' overall care, will result in a self with an integrated and adaptive repertoire of such RRPs and a capacity for self-reflection, empathy and executive function. Such a mature self will be capable of and engage in open dialogue with others externally and internally (in self-to-self dialogue) that CAT would see as characteristic of mental health and by implication of adaptive and consensual reality testing.

However, an individual with neurocognitive impairments (albeit possibly subtle) leading to difficulties in information processing and social interactions might actually, early in development, elicit hostile, critical or neglectful reactions from others. Others, with lesser or minimal degrees of biological vulnerability, may of course in reality experience a harsh or depriving upbringing that may in turn contribute to the likelihood of later developing a psychotic disorder. From a CAT perspective, all such experiences would be seen to be internalized as increasingly maladaptive RRPs (characterized for example by a 'criticised' relative to 'criticising or rejecting' voice, a 'neglected' relative to 'feeling one "ought" to manage alone' voice, or a role of 'abused' relative to 'potentially abusing of either self or others'). These would collectively constitute an increase in psychological vulnerability and also consequently, in a dialectical process, contribute to further stressful interpersonal difficulties, thereby further increasing vulnerability. Cognitive analytic therapy would see such stress as being experienced as and mediated through not only difficult, 'real', social and interpersonal experience but also increasingly as internally generated, 'self-stressful' experience through the internal enactment of RRPs (in self–self enactments or dialogue). The up-shot of these internal enactments we have described as 'internal expressed emotion' (see case vignette). This represents a major focus for therapy in this model for psychotic disorders, both schizophrenic and bipolar affective, although the underlying neurobiology of the latter appears to differ considerably [6,20]. Given that the process of neurological development is not complete until late adolescence and may be adversely effected by stress and chronic trauma both in childhood [21,22] and also *in utero* [23,24], possibly through the toxic effects of stress hormones [25], it can be seen that such mechanisms could account for increased vulnerability at a neurobiological level in such chronically stressed individuals. It could also account for an increased incidence of psychotic disorders in those already vulnerable by virtue of genetic or other biological loading.

The internalization of a maladaptive repertoire of RRPs and the consequences of their enactments is a principal focus of therapy in CAT in 'neurotic' and, along with attention to damage to higher self structures at a meta-procedural level, in personality disorders. This would remain the focus of therapy for psychotic disorders at all stages of their development or expression. Many so-called 'neurotic' or personality disorders are in fact also characterized by disconnected and extreme maladaptive RRPs as well as what have been described as refractory 'pockets' [Heather Wood, personal communication] of impaired consensual reality testing or frank psychosis. In the CAT model of levels of damage to the self (for whatever causes) [9,26,27], impairment of integration of role procedures would result in impairment of self-reflection and executive function generally (i.e. to be occurring at levels 2 and 3 of the model).

In more severe psychotic states CAT would understand psychotic symptoms and phenomena to represent the muddled, amplified or distorted enactments of such RRPs as well as their associated dialogic voices. Such internalized voices would be seen in CAT to represent normal phenomena from a dialogic point of view but in psychotic states similarly to represent distorted, exaggerated and apparently alien phenomena. Thus, they might be experienced as the critical voices of external agencies whose exact nature would be related to both the cultural context and individual history of an individual. These experiences might of course in part arise from misattribution or misinterpretation of percepts due to underlying neurocognitive deficits. Extreme, psychologically debilitating or de-motivating critical voices can also be seen clinically (see case vignette) to contribute to so called negative symptoms of psychotic disorders, in addition to presumed neurobiological deficits. One implication of this perspective is that overall, psychosis represents an extreme version of being 'out of dialogue' both internally and externally. This CAT would be seen as maladaptive and damaging in itself and this may in turn be a contributory factor to the development and perpetuation of such states. A further incidental contribution of this model, given its view of psychotic states as, in large part, variants of normal mental processes, would be to normalize and destigmatize such disorders to a significant extent.

From a CAT perspective, extreme enactments of maladaptive RRPs, especially if distorted further by underlying neurocognitive deficits, may also result in the eliciting of what would be seen as maladaptive

reciprocal reactions from treating staff who may mistakenly attribute them to purely biologically generated psychotic states. By 'colluding' with them in this way, staff may inadvertently reinforce or exacerbate them (e.g. by forcing treatment onto or rejecting or ignoring a patient). Such staff reactions are characteristic of interactions with any sort of so-called 'difficult' [9,28] or 'resistant' [9,29] patient and require an adequate and coherent model to enable staff to understand them and respond appropriately. Given the recognized limitations of many other models, whether cognitively or psychodynamically based, in conceptualizing and engaging such patients, we suggest that the CAT model may have a particularly useful contribution to make in this context [9,30,31].

## Case vignette (reproduced by permission from Ryle and Kerr [9])

The following summary of a case vignette is offered to illustrate many of the points made in the above outline of a CAT-based model of psychosis. A fuller account of this case, details of which were altered to preserve anonymity, will be found elsewhere [9].

'Sarah' was a young woman with a long history of a recurrent psychotic illness, which had been described as schizoaffective. She had had multiple admissions, often under the provisions of the Mental Health Act and had often been locked up and forcibly medicated. Her psychotic episodes were characterized by powerful auditory hallucinations that she described as the voice of the Devil or of God. Interestingly, she noted at presentation that she felt a state of 'frozen anger' towards God. She was seen by her treating team as 'difficult' and non-communicative and someone with whom it was hard to collaborate on treatment (i.e. medication). She lived alone in a hostel and although a bright fine art graduate she was no longer able to work and had little contact with her family. Her childhood experience had been of a difficult and uncommunicative family where she felt constantly criticised, although interestingly, there appeared little evidence of overt maltreatment.

In view of her fragility and apparent psychological damage she was offered 40 sessions of CAT. One of her initial stated aims was to try to rediscover her 'real self', which she felt had been lost through her illness. She was also concerned to understand more of what caused her relapses or 'snapping the trip-wire' as she put it. Her initial wariness mellowed gradually and it was possible to explore her story and difficulties by means of both written (not shown) and diagrammatic reformulations. Both of these became powerful documents ('tools') within the therapy, and by her account, were of considerable and unexpected assistance to her. Both the original 'messy' diagram (Fig. 1) where a 'subjective' self (a mix of states of mind, emotions and roles) and their enactments are sketched out, as well as the subsequent simplified and more focused version (Fig. 2) are shown. Interestingly, she insisted on writing on top of the first diagram that 'I have a personality', which she then amended to 'I *am* a personality'.

The second diagram illustrates more clearly the existence of two key RRPs and their enactments in a manner that is clearly circular and self-perpetuating. It also illustrates sources of internal stress ('internal expressed emotion') and how some of her emotionally cut-off ('out of dialogue') enactments led to externally stressful experience that could at times be seriously self-destructive and lead to increasingly cut-off and disturbed (psychotic) states of mind (e.g. 'mind fills with ideas'). It can also be seen from these diagrams that much of her apparently psychotic behaviour can be interpreted as extreme and distorted enactment of RRPs such as 'criticised-criticising' or 'hurt-hurting'. The associated dialogic voices experienced as emanating from the Devil or God can clearly be seen to be located in this context and made good sense to her. One of the key features of the diagram and of her story overall as rehearsed in her written reformulation letter (not shown) was her long-standing and self-perpetuating state of being 'out of dialogue', which she could see as being clearly self-stressful with its deleterious consequences. The key target procedures or 'issues' that were addressed included her enactment of a 'coping alone' role, her belief in her 'critical' voice and fear that because of being 'vulnerable' life could never work out. Therapeutic 'aims' were focused on these accordingly (for details see [9]).

One of the major issues throughout therapy was that of conceptualizing her disorder that she continued to see (in part, correctly, we would argue) as being 'emotional' rather than 'biological'. Subsequent to therapy the team reported a difference in working with her and how in turn they were less drawn into being irritated or frustrated with her (stressful and isolating for her) given the more communicative and somewhat more optimistic position she was able to adopt as a consequence of therapy. She also reported at 1 year follow-up being more engaged with the outside world and that she was doing more voluntary work in a befriending project. She was better able to communicate within limits with her family without getting drawn into unresolvable frustrations. As a final and very poignant outcome of therapy she reported being able now to cry openly with God, which seemed both a literal and symbolic step forward from a dialogic point of view.

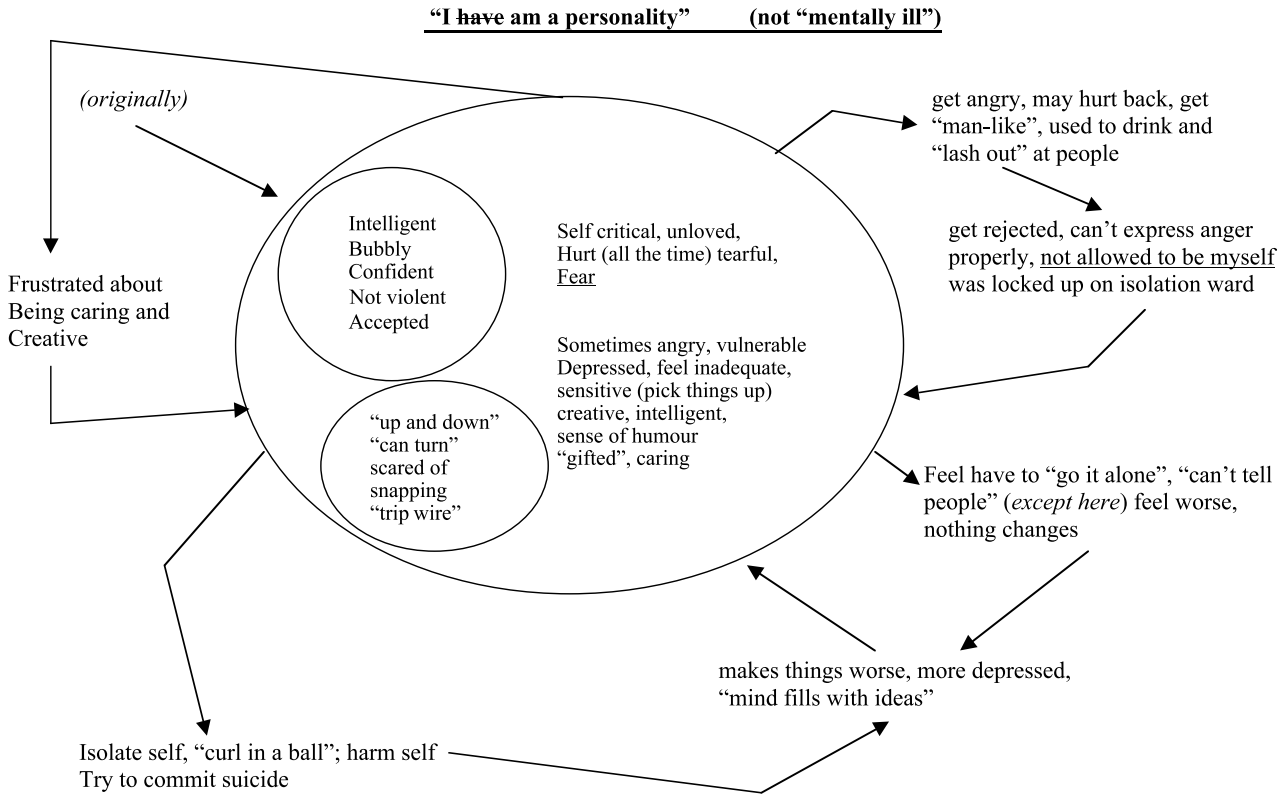


*Figure 1. Original 'messy' diagram drawn with 'Sarah' depicting a 'subjective' self, its constituent affects and roles and their subsequent enactments.*

This therapy illustrates many of the theoretical and clinical points above. Of particular interest is how this patient appears to have psychologically internalized as RRPs the early interactions that she experienced as hostile and critical, but which may in dialectical fashion have been partly created by her own social difficulties and 'sensitivity'. These may then in turn have created further vulnerability through the internalized effects of this stress. The enactment of these RRPs and their associated dialogic voices can be traced through diagrammatic reformulation in distorted and amplified form into her 'psychotic' symptoms. They can also be traced into the circular way in which their enactment could create further stress both internally and externally by eliciting unwittingly unhelpful reactions from those around her, both family and staff. Implicit in the aims of therapy was an understanding and revision of these maladaptive enactments and their systemic consequences. Thus, a further important outcome of this therapy was the reduction of stress reported by the staff team. In the case reported above and in others reported elsewhere a further important outcome has been reduction in number of relapses and hospital admissions in the period (1 year) of follow-up with reduction in accompanying economic costs and also in reported stress and distress to family, friends and other carers [6,9].

## Implications of a CAT model of psychosis for treatment and possible prevention

### *Treatment*

Cognitive analytic therapy can clearly offer a generic therapeutic contribution to psychotic disorders similar to any other that is experienced by a patient as supportive and collaborative. Both clinical experience and the above theoretical model suggest that working specifically with patients on their repertoire of RRPs and self-state disturbances and mapping them out along with their associated dialogic voices may be a distinctive contribution of CAT. This benefit may extend not only to patients themselves but also to others involved, such as family, friends and particularly staff involved in treatment programmes. A CAT-based approach may be helpful to patients whether in a stable or more acute state or indeed prior to the onset of an overt disorder in someone identified as being at risk. Therefore, the model may be useful to individual staff or multidisciplinary

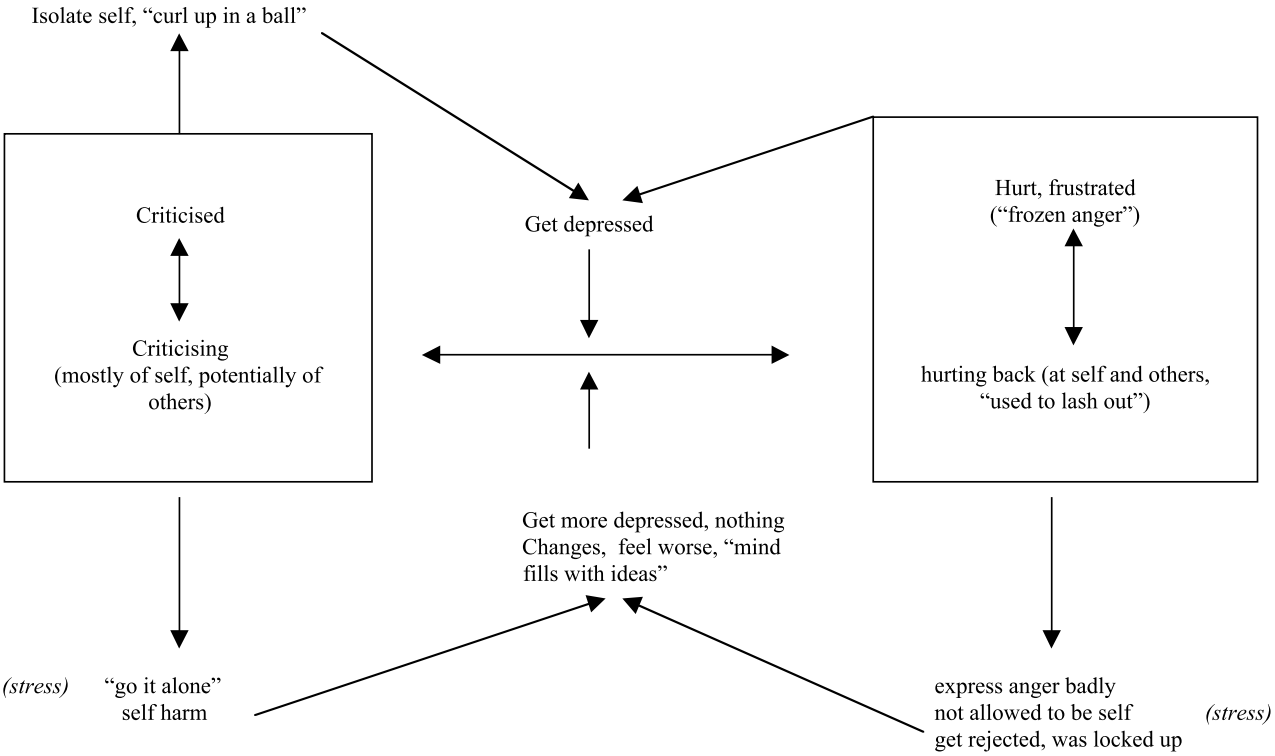


*Figure 2. Simplified diagram for 'Sarah' showing key reciprocal roles and their enactments. Some enactments are identified explicitly as constituting or eliciting 'stress'.*

teams attempting to understand and work with challenging and apparently wholly biologically determined psychotic phenomena. These may otherwise be incomprehensible and experienced as 'difficult' behaviour on the part of the patient. Clearly, in very acute or refractory disorders it may be hard to make these links or create understandings but such CAT-based approaches may nonetheless render the staff team less likely to reject out of hand the behaviour and experiences of the patient.

Cognitive analytic therapy also aims to create with the patient a coherent and meaningful account of their difficulties and experiences in an educational and supportive manner. In particular, the CAT-based narrative approach is of considerable importance in acknowledging or 'bearing witness' to the patent's story. Therapy with such patients will also often require the working through and mourning of a life that has been lost or might have been led, as well as experiences that have frequently been overtly traumatic. The reformulation documents created jointly in therapy often come to function as reassuring and containing 'transitional objects' for patients as well as, at times, for therapists. Thus, the therapist or worker using a CAT-informed approach would also implicitly function as a 'secure base'.

A further major focus of treatment in CAT is the identification and revision of the 'dialogic' voices associated with RRPs and often experienced in psychotic disorders in distorted, disconnected and apparently alien forms (see case vignette). From a CAT perspective, these are viewed as simply an exaggeration or distortion of normal phenomena possibly exacerbated by stress and partly due to underlying neurocognitive or information-processing abnormalities. This therapeutic and implicitly destigmatizing position is of course close to that proposed from a different perspective by workers such as Romme [32] who have pioneered therapeutic 'hearing voices' groups for patients, these appear, on the basis so far of uncontrolled studies, to be clinically helpful.

An important implication of the CAT model is that psychotic disorders are implicitly partly systemic and that a significant part of their apparent phenomenology is related in fact to interactions with staff teams and others [6,9]. These interactions are frequently stressful and may elicit ultimately unhelpful 'collusive' reactions (rather than helpful therapeutic responses) as noted above. We suggest again that an effective and collaborative model of psychotic disorders can minimize this important source of difficulty and stress both for

patients, relatives and teams. It needs to be stressed that this is an important aspect of such disorders and that they are not simply located 'in' the patient although many might more conveniently like to do so. Such dynamics apply notably to other types of 'difficult' patient such as those with severe personality disorder [9]. For such difficulties the use of a CAT-based 'contextual reformulation', mapping out both patient and staff role enactments, may be helpful [6,9,31]. Therapeutic work should therefore aim to minimize the likelihood of eliciting unhelpful role reactions from others (e.g. family, friends or staff) and also be less likely to promote 'resistance', 'sabotaging' or 'non-compliant' enactments [6,9]. Such 'self-sabotaging' enactments are also characteristic of distressed and psychologically damaged individuals with medical disorders such as diabetes and asthma for which there is good evidence for the efficacy of a CAT-based approach [33,34].

Overall, this CAT-based model of psychotic disorders and their treatment fulfils the criteria for effective treatment of patients with these [5] and other comparable, 'difficult' disorders such as personality disorder [35]. It could also therefore provide an integrative platform or base from which to negotiate and implement other forms of treatment as and when required [4].

*Prevention*

Historically, prevention has been neglected by health services that have inevitably tended to focus on overt disorder [36,37], given the burden of established disorder and the apparently overwhelming task of prevention. However, prevention and early intervention have become increasingly recognized as important for mental disorders [36]. This is particularly true for psychotic disorders given the general acceptance of a stress-vulnerability model and the evidence that duration of untreated illness correlates with poor outcome [38]. By extension, early intervention strategies aimed at minimizing the occurrence of psychosocial stress and its internalization in the way outlined above might also be of considerable importance both in reducing the incidence and severity of subsequent, overt, psychotic disorders [39].

An important first step in achieving this will be, of course, more accurate prediction of individuals at risk. It seems likely that assessment of morbidity of deep psychological structures (conceived of in CAT as a repertoire of RRPs in the context of damage at different structural levels to the self) will play an important role in assessment of vulnerability, as well as in behavioural phenotyping of those with overt disorders. Clearly, such ventures will also depend on more accurate characterization of genetic and biological abnormalities, which remains still at an early stage. Current approaches include the use of instruments such as the 'comprehensive assessment of at risk states' [40]. Characterization of possible psychological and social vulnerability factors or 'at risk states' could include a CAT type reformulation and mapping. This could be augmented by semi-quantitative techniques such as use of Repertory Grids [9]. The RRPs elicited could then be subject to the same scrutiny as more behaviourally defined variables.

Cognitive analytic therapy could also play an important role in preventive intervention in psychotic disorders. The ethics of such approaches have been extensively debated [40–42]. On one hand, some authors have argued forcefully against use of potentially toxic pharmacotherapy [43] while on the other McGorry *et al*. [39] have recently demonstrated the efficacy and effectiveness of a combined pharmacotherapeutic and cognitive-behavioural intervention for individuals at 'ultra-high risk' for psychosis.

In this climate of fierce debate, we suggest that a CAT-based approach allows for the genuine integration of biological and psychosocial approaches, so avoiding the throwing of any baby out with the bathwater. It has the advantage of patient and community acceptability, when compared to pharmacotherapy, without setting itself in opposition to this latter modality. Furthermore, CAT has the advantage of being able to integrate the diverse and often ill-defined psychopathological presentations in at-risk individuals. Clinical experience with this age group suggests that young people present with 'blends' of psychopathology, rather than discrete syndromes. Cognitive analytic therapy's integrative and idiographic approach lends itself to addressing these problems in a meaningful way. Experience of using CAT with young people is still limited and it might be anticipated that use of the CAT 'tools' of written and diagrammatic reformulation could prove problematic. However, clinical experience in the UK and in the Melbourne early intervention study for borderline personality disorder (BPD) [44] suggests that the collaborative and creative use of these tools and of CAT concepts in general is well-received and helpful in this patient group.

## Service and resource implications of a CAT model of psychosis

Many of the further clinical, service and also resource implications of the CAT model of psychosis are of course shared by other psychological treatment models, most notably those with a cognitive base. These implications devolve largely around the need for recognition of the importance of psychosocial stressors (with their

possible developmental neurobiological consequences) at all stages of psychotic disorders. The consequent need to train teams in a robust, coherent integrative model that is consistent with the evidence relating to origins of these disorders from biological, social and psychological perspectives and from which to base treatments of whatever modality, has major resource implications. From this perspective it is evident that the current, largely piece-meal and ad hoc interventions (based on essentially biomedical models of psychotic disorders) offered by most services (apart from a few, usually research-orientated, centres of excellence), even in the developed world, are seriously deficient.

One important implication of the CAT model is that entire multidisciplinary teams require training and ongoing supervision in a coherent and robust model of psychotic disorders and their systemic consequences. This would create a cadre of 'specialist generic' professionals in this field. We argue that, without them, effective work cannot be undertaken and indeed much damage may unwittingly be done. Such generic mental health professionals would be required in addition to a group of more specialist therapists (of various modalities, such as individual, family and possibly group-based interventions) and would also have a necessary and important role to play in early intervention projects, such as that of a trial of CAT in Melbourne for young people at high risk of developing BPD [44].

It is accepted, although not yet implemented, that any integrated effective service will need to offer early identification and preventive intervention for those at risk, effective engagement and treatment of those with developing disorders and long-term support and treatment for those with established disorders. This will require further development, articulation and adoption of a model such as CAT and training in it. Such programmes will require formal, controlled evaluation as well as dismantling studies to identify which aspects are effective and acceptable to patients. The articulation of a researchable CAT-based model of psychosis may be a useful initial contribution.

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Further information on the activities of the Association for Cognitive Analytic Therapy (ACAT) is available at http://www.acat.org.uk

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