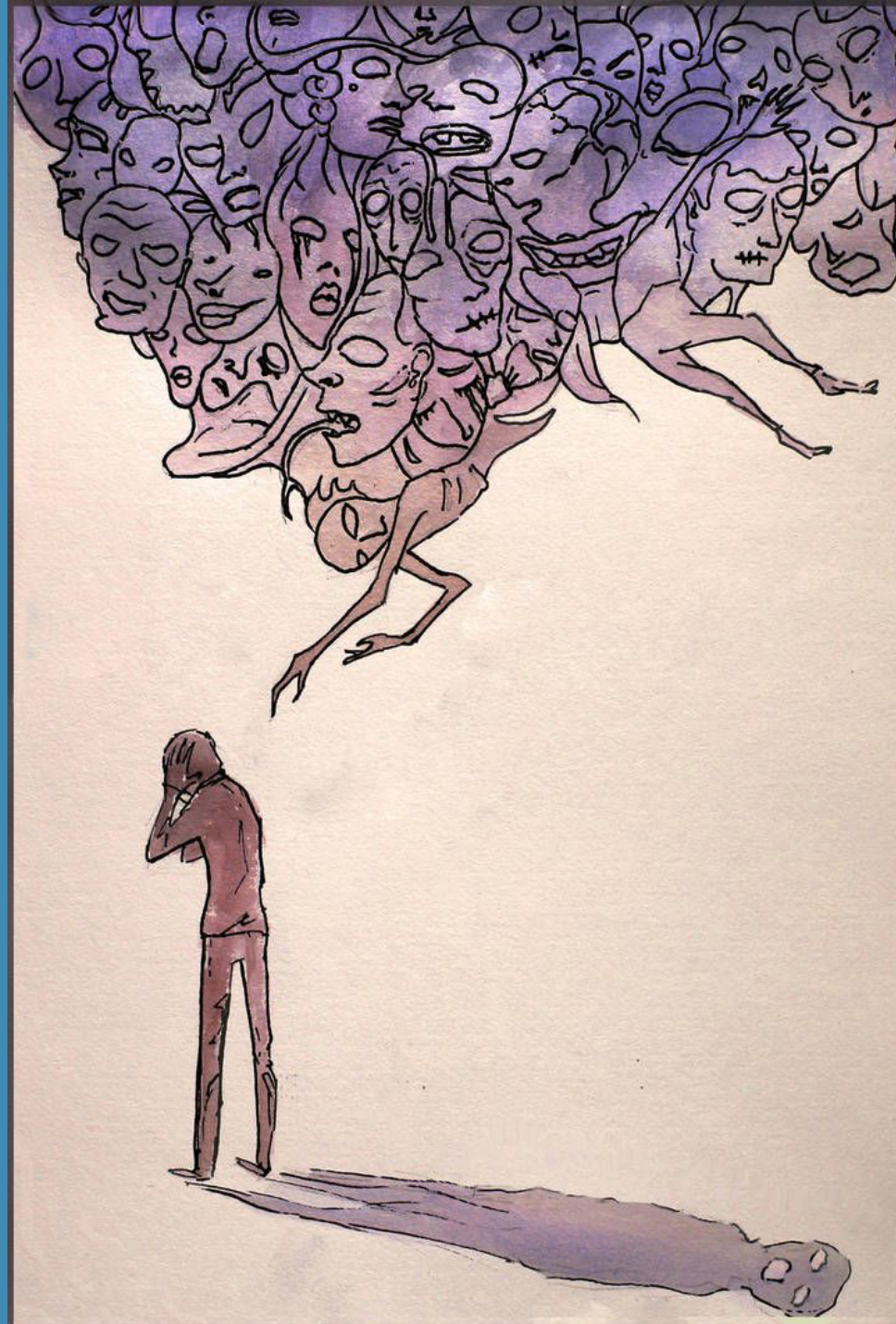


PSYCHOSIS





BRIEF HISTORICAL OVERVIEW

- Descriptions of schizophrenic symptoms can be traced far back in history, but not considered to be symptoms of a single disorder until late in the nineteenth century.
- Kraepelin (1921) – “Dementia Praecox”
Chronic psychotic illness with a slow declining course
- Bleuler (1911): the disorder did not always end in profound deterioration or always began in late adolescence.
- Bleuler suggested a new name for the disorder—*schizophrenia*:

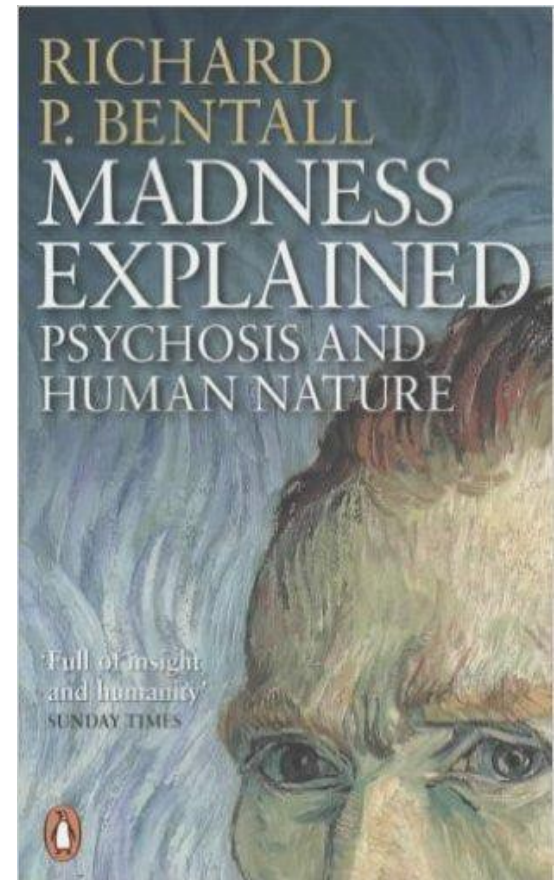
The splitting of mental associations

Lack of agreement as to exact nature of schizophrenia

Classification of schizophrenia has proven difficult: current debate around whether it actually exists as a specific diagnosis.

DSM-III criteria differed from DSM-IV, which differs from new DSM-V classification:

- Indicates difficulties in accurate classification



CLASSIFYING SCHIZOPHRENIA

Generally considered to be a psychoses comprising a number of related disorders (spectrum) around distorted thinking and perceptual processes.



Characterised by:

delusions

hallucinations

disorganised
thought/behaviour

THE NATURE OF PSYCHOTIC SYMPTOMS

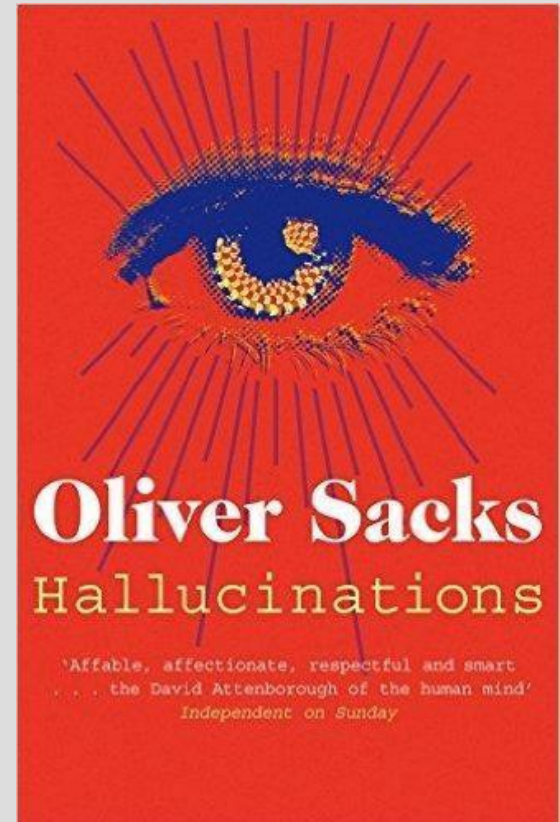
- Positive symptoms
 - *Excess of normal function:*
 - Delusions
 - Hallucinations
 - Disorganized thinking (speech)
 - Abnormal motor behaviour
- Negative symptoms
 - *Diminution of normal function*

DELUSIONS

- Positive symptoms
 - Persecutory
 - Grandiose
 - Delusions of control
 - Delusions of reference
 - Nihilistic delusions
 - Erotomantic delusions

HALLUCINATIONS

- Hearing voices are the most common form of hallucination
- Voices may be experienced as describing the individuals activities, warning of impending dangers, ordering them to behave in certain ways
- Suggestion of
 - Reality monitoring deficit
 - Self monitoring deficit



DISORGANIZED THINKING (SPEECH)

- Derailment
- Tangentiality
- Clanging
- Neologisms
- Word salads

CLANGING

TH: 'What colour is your dress?'

CL: 'Red . . . Like a bed.'

TH: 'Why is it like a bed?'

CL: 'Because it's dead.'

TH: 'Why is a bed like being dead?'

CL: 'I dunno . . . maybe it's a med.'

TH: 'What's a med?'

CL: 'Abled.'

NEOLOGISMS

- Many individuals suffering psychotic symptoms often make up words.
- These *neologisms* are frequently constructed by condensing or combining several words.
 - Sniggeration - A giggle orsniggering
 - Relaudation - Praising over and over
 - Circlingology - Study of a rolling circle

WORD SALADS

'Everything is going around in slow motion. The boxes are clanging and chattering to be let out. Behind my forehead the past is surfacing mixing a bottle of acid solution. A stake jams a door that leads to a mirage of broken appearances. Inside a box, pounding fists try to pull down my imagination. The ground work is split into hundreds of pieces; each fragment is separate as if it had some kind of individual purpose. The truth is locked up in a unit.'

ABNORMAL MOTOR BEHAVIOUR

- Disorganized behaviour may include:
 - Childlike and silly behaviour
 - Behaviour inappropriate to the context (e.g. masturbating in public)
 - Unpredictable and agitated (e.g. shouting and swearing in the street)
 - Catatonic behaviours are characterized by decreased reactivity to the environment, rigidity and immobility

NEGATIVE SYMPTOMS

- Common within a diagnosis of schizophrenia, less so in other schizophrenia spectrum disorders
- Negative symptoms include:
 - Diminished emotional expression
 - Avolition
 - Alogia
 - Anhedonia
 - Asociality

THE PREVALENCE OF SCHIZOPHRENIA SPECTRUM PROBLEMS

- Lifetime prevalence is around 0.3-0.7%
- 24 million diagnosed worldwide
- Largely between 15-35 years old
- Mortality is 50% higher than normal
- Significant lifelong impairment
- Cultural differences in course of disease progression and prevalence
 - Immigration
 - Ethnicity

THE “SCHIZOPHRENIA” CONTROVERSY

- The experience and symptoms of schizophrenia vary markedly
 - Two people with schizophrenia may present in very different ways and report very different experiences
- Degree to which symptoms effect daily functioning also vary
- People diagnosed with schizophrenia respond to different medications (some fail to respond to any)
- Suggests individual symptoms may have different causes and require different treatment
- Suggests that there is not one underlying cause of Schizophrenia – but different disorders?

THE “SCHIZOPHRENIA” CONTROVERSY

Bentall (1993): the diagnosis of schizophrenia is not valid & should be abandoned

Bennett (2003):

- better to look at the various symptoms of schizophrenia and each be treated as a disorder in its own right
- need to better understand causes of Schizophrenia

Van Os (2009): should be re-named “salience disorder” to avoid stigma

Paris (2013) – “we will have to wait for a better understanding of the illness before we are in a position to give it a better name” (p95)

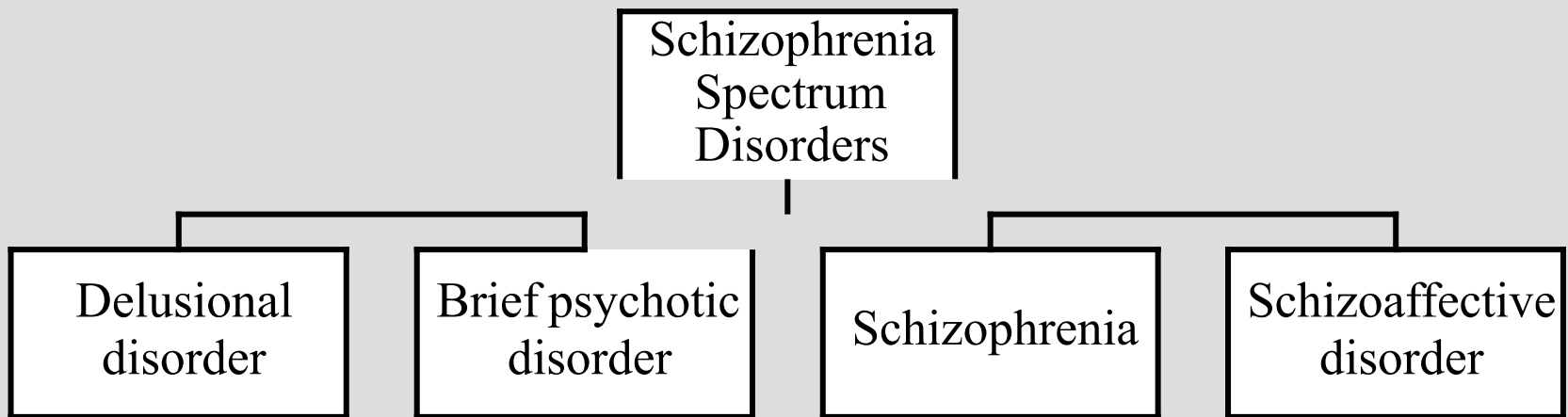
DSMV CLASSIFICATION

- As with DSM-IV, only two of many possible symptoms needs to be present for at least one month in order to meet the DSM criteria for schizophrenia:
 - Delusions
 - Hallucinations
 - Disorganized speech
 - Grossly disorganized or catatonic behavior
 - Negative symptoms

DSMV CLASSIFICATION

- BUT – traditional sub-types of Schizophrenia have been dropped
- Now also includes disorders within the Schizophrenia spectrum
 - Schizotypal personality disorder (previously under Personality Disorders)
 - Schizophreniform disorder (brief cases that recover quickly)
 - Brief psychotic disorder (less than one month of symptoms)
 - Delusional disorder (delusions without disorder of thought)
- Maintains distinction between Schizophrenia and Bipolar Disorder despite evidence for genetic similarity
 - Both groups respond to anti-psychotics but more consistent for schizophrenia
 - Lithium remains important treatment for bipolar (acute treatment and relapse prevention).

SCHIZOPHRENIA SPECTRUM DISORDERS



DELUSIONAL DISORDER

- New diagnostic category in DSM-5
- Lifetime prevalence rate is around 0.2%
- Persecutory type (most common)
- Erotomantic type
- Grandiose type

BRIEF PSYCHOTIC DISORDER

- New diagnostic category in DSM-5
- May account for 9% cases of first-onset psychosis
- Sudden onset of at least 1 of main psychotic symptoms
- Change in state occurring within 2 weeks
- Associated with emotional turmoil or overwhelming confusion

SCHIZOPHRENIA

- Range of symptoms covering cognitive, behavioural and emotional dysfunction and impaired occupational or social functioning
- Prodromal, active and residual phases

SCHIZOAFFECTIVE DISORDER

- Diagnosed when an individual's symptoms meet criteria for schizophrenia but where there is also significant, concurrent episode of depression/mania
- Impairs social and occupational functioning
- Increased risk of suicide

THE COURSE OF PSYCHOTIC SYMPTOMS

Prodromal stage

- Late adolescence or early adulthood
- Slow deterioration from normal life and social
- interaction over about 5 years
- Strong evidence for *stress-diathesis* explanation

Active stage

- Unambiguous symptoms of psychosis

Residual stage

- Reduction in positive symptoms, negative symptoms still present
- Relapse is common
 - Exposure to stress

THE AETIOLOGY OF PSYCHOTIC SYMPTOMS

Overarching approach is a
diathesis-stress one

Most theories of schizophrenia
have generally attempted to
explain only specific aspects of
the symptomatology (such as
the acquisition of paranoid
thinking)

THE AETIOLOGY OF PSYCHOTIC SYMPTOMS

Biological theories

- Genetic factors
- Molecular genetics
- Neuroscience of schizophrenia

Psychological theories

Psychodynamic theories
Behavioural theories
Cognitive theories

Sociocultural theories

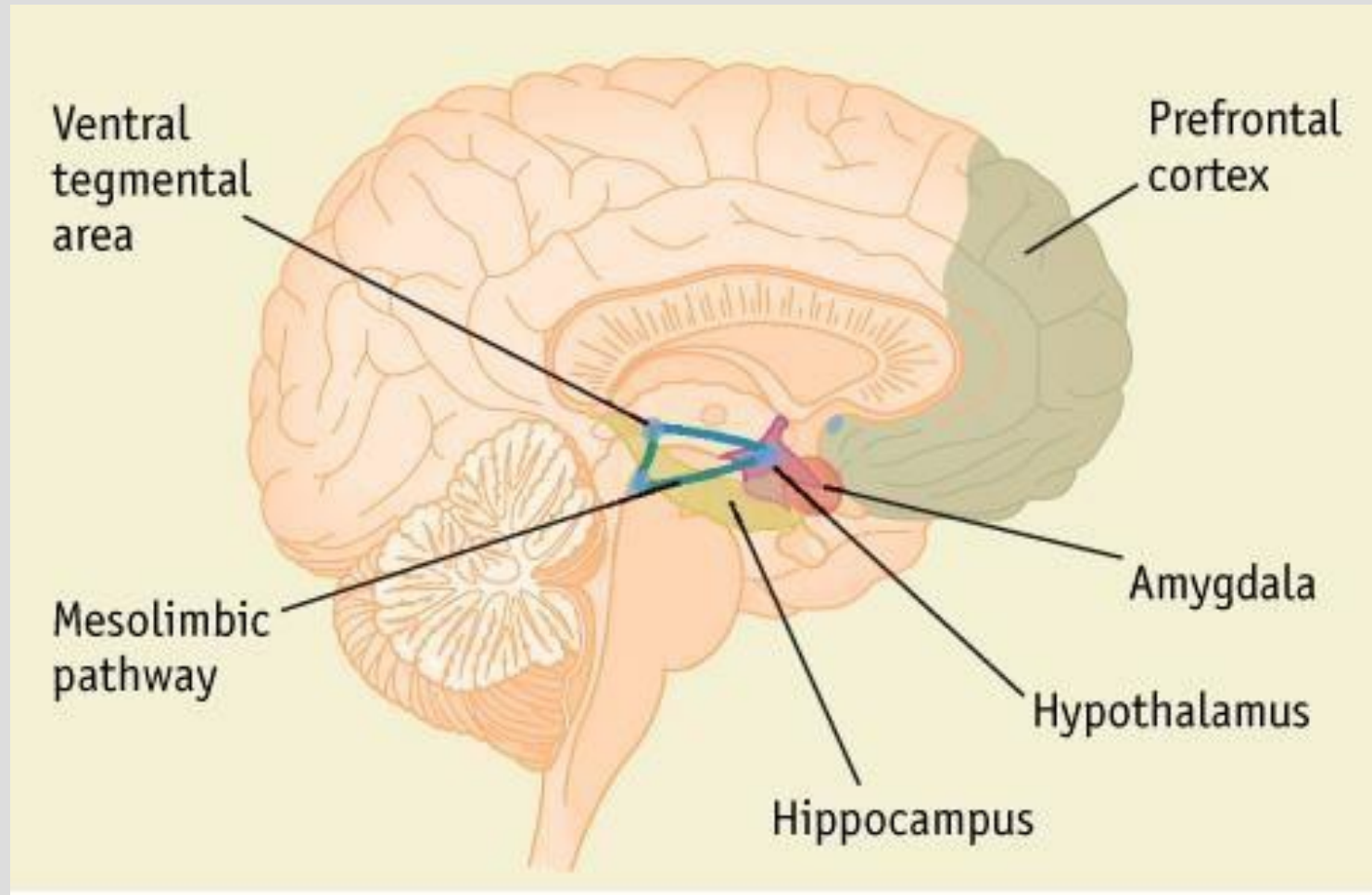
- Social factors
- Familial factors

BIOLOGICAL THEORIES OF SCHIZOPHRENIA

- **Genetic Theories:** evidence suggests genetics as a **vulnerability factor rather than sole causal factor...**
- 48% risk for MZ twins v 17% DZ (Tsuang, 2000)
- Difficult to separate out genetic and environmental factors in many studies
- Tienari et al. (2000):
 - The risk of schizophrenia in adopted away offspring of schizophrenic mothers was 4 times higher than those of non-schizophrenic mothers
 - Interaction effect with environment: risk greater for children of schizophrenic mothers if in a home with communication difficulties
- 89% of people with schizophrenia have no known relative with the disorder

THE DOPAMINE HYPOTHESIS

- Some of the experiences of schizophrenia may result from excess activity in the parts of the brain controlled by dopamine.
- Amphetamine use which increases dopamine levels in brain results in schizophrenic type-behaviour (paranoia)
- Drugs which block dopamine often effective for schizophrenia (and amphetamine after-effects!)



Areas of Abnormal Dopamine Activity in the Brain in Schizophrenia

BIOLOGICAL THEORIES OF SCHIZOPHRENIA

BUT

- Research based upon those already with schizophrenia
 - cause or consequence?
- Drugs that block dopamine do not always improve symptoms... may reflect different “types” of symptoms and causal factors....

BIOLOGICAL THEORIES OF SCHIZOPHRENIA

- **Birth Complications**

- Geddes et al. (1999) Particularly those involving loss of oxygen that could damage brain

- **Childhood Viral Infections**

- Torrey et al. 1997: children born in winter months more likely to develop schizophrenia than those born in summer months
- Neural damage as a result of viral diseases?

BIOLOGICAL THEORIES OF SCHIZOPHRENIA

- **Cannabis use**

- Andreasson et al., (1987) The more cannabis smoked as age of 18, the greater the risk of schizophrenia over 15 yr follow-up
- Or – are those who experience early schizophrenic symptoms more likely to use cannabis in an attempt to alleviate symptoms?

PSYCHOLOGICAL THEORIES

- Psychodynamic theory
 - Fromm-Reichman (1948): the schizophrenogenic mother
 - Results from having a mother who appears warm and
 - self-sacrificing but is actually cold and domineering
 - Mixed signals create confusion and chaotic thoughts/actions
 - Bateson et al. (1956) “double-bind theory”: parents deal with children in contradictory and confusing ways
 - Little empirical evidence

PSYCHOLOGICAL THEORIES

- **Negative expressed emotion (NEE)**
 - High levels of negative emotion, hostility or criticism can result in relapse in people with schizophrenia.
 - Wahlberg et al., (2000) – may also trigger onset of schizophrenia in vulnerable families.

PSYCHOLOGICAL CAUSES

- Cognitive models:
 - Accept strong biological bases of Schizophrenia
 - Explain the cognitive processes associated with the different symptoms of schizophrenia
 - Believe that these cognitions are not qualitatively different from
 - “normal” population but differ in content
- **Delusions:**
 - may be a rational attempt to interpret bizarre experiences
 - Stem from bias to hold persecutory beliefs even about neutral stimuli (e.g. a story in a book)

PSYCHOLOGICAL THEORIES

- Schizophrenia as the end-point of “poor coping”
- Some of the symptoms of schizophrenia are not exclusive to the disorder: many people hear voices in their head
 - Is it the inability to deal with these experiences that differentiate those who experience schizophrenia?
- Birchwood et al. (2000)
 - Onset of schizophrenia often associated with increasing use of poor coping efforts
 - Social withdrawal
 - Poor sleeping habits
 - Lack of any daily routine/structure
 - Use of drug

SOCIOCULTURAL THEORIES

- Highest rates of schizophrenia found in lower SES groups
- Social causation or social drift?
 - Social causation: is low SES a risk factor for schizophrenia?
 - Social drift: is schizophrenia a risk factor for low SES?
 - Fox (1990) – most evidence supports social causation rather than social drift
 - High levels of stress found in low SES groups may be a causal factor for schizophrenia amongst vulnerable individuals (Tsuang et al., 1986)

TREATMENT

HOSPITAL TREATMENT

- Some patients are chronically disturbed and require long-term institutional treatment.
- Social learning programmes, sometimes called *token economies*, can be useful for these patients.
- Specific behavioural contingencies are put into place for all of the patients on a hospital ward.
- Carefully structured inpatient programmes can have important positive effects for chronic schizophrenic patients.

BIOLOGICAL TREATMENTS

- Antipsychotic drugs
- Electro-convulsive therapy
 - Was first treatment in past but limited use in present
 - Tharyan (2002): 50% showed some improvement compared to placebo in short-term but not longer term
 - Less effective than antipsychotic medicine
 - <https://www.youtube.com/watch?v=9L2-B-aluCE> (ECT for schizophrenia)

Pharmacotherapy

- Reduce the severity of, and sometimes eliminate, psychotic symptoms.
- Traditional “first generation” and newer Atypical Antipsychotic Medication
- All antipsychotic medications act by blocking dopamine receptors in the cortical and limbic areas of the brain.
- They also affect a number of other neurotransmitters, including serotonin, norepinephrine, and acetylcholine

- Control the positive symptoms of schizophrenia
- Sedative effect of most antipsychotic drugs
- Dramatically reduce average hospital stay
- Sarti & Cournos (1990): delay rather prevent relapse
- Side-effects
- Low-adherence

SIDE EFFECTS OF CLASSIS NEUROLEPTICS

- assortment of neurological disturbances, such as muscular rigidity, tremors, restless agitation, peculiar involuntary postures, and motor inertia (Dyskinesia)

Why?

- Known as extrapyramidal symptoms (EPS) - mediated by the extrapyramidal neural pathways that connect the brain to the motor neurons in the spinal cord.

EFFECTIVENESS

- About a quarter of people with schizophrenia do not respond to neuroleptic drugs

i.e. Drugs that block dopamine do not always improve symptoms... may reflect different “types” of symptoms and causal factors...

- More effective at treating positive than negative symptoms

Relapse

- Gitlin et al., (2001).
 - 78% relapse rate within one year of discontinuing drug,
 - 98% within two years
 - compared to a third of those who remain on medication

ATYPICAL ANTIPSYCHOTICS

- Less likely than the classical antipsychotics to produce unpleasant motor side effects.
- Greater compliance and lower rates of drop out because of their decreased motor side effects.
- Clinical trials indicate at least as effective for the treatment of positive symptoms, and generally more effective for negative symptoms (Dossenbach et al., 2004)
- But - side effects of weight gain and obesity.

- **Antipsychotic drugs** reduce the severity of, and sometimes eliminate, psychotic symptoms.
- Classical antipsychotics are also known as *neuroleptic* drugs because they also induce side effects that resemble the motor symptoms of Parkinson's disease.
- Double-blind, placebo-controlled studies have confirmed effectiveness
- Most individuals with Schizophrenia continue to take medication after they recover from psychotic episodes, at lower dosages, to reduce likelihood of relapse.

COMMUNITY TREATMENT

- A psychosocial intervention that is delivered by an interdisciplinary team of clinicians.
- They provide a combination of psychological treatments—including education, support, skills training, and rehabilitation—as well as medication.

PSYCHOLOGICAL TREATMENTS

Focus on teaching communication and living skills and reducing isolation in people with schizophrenia

- **Behavioural:** operant conditioning, modeling,
- **Cognitive:** Recognition of demoralizing attitudes they may have toward their illness,
- **Family interventions:** family therapy, token economies
- **Social Interventions:** self-help groups, assertive community treatment programs.

Social skills training (SST)

- a structured, educational approach that involves modeling, role playing, and the provision of social reinforcement for appropriate behaviours.
- in combination with neuroleptic medication, SST leads to improved performance on measures of social adjustment.
- It is not clear, however, that SST has any beneficial effects on relapse rates.

COGNITIVE-BEHAVIOURAL THERAPY (CBTP)

- Designed to help patients evaluate, test, and correct distorted ways of thinking about themselves and their social environments.
- Belief modification
 - Uses **verbal challenge** and **behavioural hypothesis testing** to try and reduce delusions and/or hallucinations
 - Jones et al. (2000): meta-analysis of 4 RCTs revealed belief modification reduced frequency and impact of hallucinations.
 - Also reduced distress associated with delusions
 - <https://www.youtube.com/watch?v=w8namZ5rt2k>

COGNITIVE-BEHAVIOURAL THERAPY:

Rector & Beck (2001) Empirical review of 7 RCTS:

- Routine care and adjunctive CBT has additional benefits over and above those achieved with routine care and general supportive therapy.
- Need longitudinal studies to identify longer-term outcomes and impact on relapse rate etc.
- Some people do not benefit

FAMILY INTERVENTIONS

- Attempt to improve the coping skills of family members, recognizing the burdens that people often endure while caring for a family member with a chronic mental disorder.
- Include an educational component that is designed to help family members understand and accept the nature of the disorder.
- Tend to be effective in delaying but not preventing relapse.
- Pharaoh et al., 2000: Interventions based upon reducing Negative Expressed Emotion resulted in:
 - Reduce relapse rate by up to 50%
 - Reduced time in hospital
 - Increased medical adherence

RISK OF PSYCHOSES

- Identifying “early signs” of psychosis a major focus of research interest
 - Belief that high risk patients could be identified, diagnosed and successfully treated (Carpenter, 2009) and that early treatment of first-episode psychoses may prevent further episodes
 - not supported in current research evidence (McGorry et al., 2010)
- Suggestion of inclusion of “Attenuated Psychosis Syndrome” in DSM-V not supported
- Concern re: adding “at risk” categories...cannot predict accurately who will go on to develop Schizophrenia

- Gabel et al. (2002): people treated using early signs approach used less medication over 2 year period than those receiving continuous medication
- No differences on measures of adjustment and well-being
- Verdoux & Cougnard (2003) insufficient evidence regarding effectiveness of early intervention programmes

SUMMARY

Anti-psychotic drugs
work in reducing
symptoms but delay

rather than prevent
relapse

Newer drugs – atypical
antipsychotics – may be
effective and have less
side-effects

Modern treatments aim
to try and prevent need
for antipsychotics if
possible: “early signs”
programmes

Cognitive techniques
such as belief
modification may prove
effective

Family therapy also
appears effective in
preventing relapse

SUMMARY

Schizophrenia one of the most severe disabling mental health disorders

Concerns over nature and classification of schizophrenia

Course and treatment effectiveness for schizophrenia varies widely across individuals

No one causal factor: a number of potential biological, social and psychological risk factors have been identified

Different courses and effectiveness of treatment further reflect these

Complexities!