

# So far

Children learn an initial language of dis-ease in their family of origin (first 3-4 yrs) – first conveyed via bodily discomforts.

It is learnt implicitly and not immediately open to reflection (images and behaviour).

Their lives depend on this illness language being effective for complaining and subsequently coping.

All languages are strategic and dependent on mind-reading skills.

[http://www.youtube.com/watch?v=\\_JmA2ClUvUY](http://www.youtube.com/watch?v=_JmA2ClUvUY)

«He who considers things in their first growth and origin ..... will obtain the clearest view of them.»

Aristotle, 'Politics, book 1 chp2'

courtesy Richard Tremblay

This illness language develops according to the same principles which form attachment strategies.

There are physiological and neuro-biological consequences of the attachment strategies.

Children do more of what they have done before when highly aroused.

# And

Trauma to caregiver or child affects presentation and recognition of psychological discomforts.

We do not start learning a new language when we are in crisis: those who hear the symptoms need to be multilingual.

We are likely to retain the form to our complaining from 6 yrs old into adulthood.

Clinicians' biases in mind-reading skills are likely to be the central ingredients in system errors in medical practice

- facilitate and maintain somatisation
- cost society more than the combined costs for treating all cancer and heart disease.

# And....

”Chance favours the prepared mind.”

Pasteur

Both for listener and speaker as new symptoms become incorporated, behaviour available from birth becomes adapted to new functions.

And meanwhile ”little belly-achers into big belly-achers (can and do) grow.” Apley

# Diagnoses and disorders vs Diseases

- Reification of symptoms to signs.
- "Do not provide a means of viewing the child's functioning in context".  
Jensen & Hoagwood, 1997
- Utility rather than validity.  
Kendell & Jablensky, 2003
- Categories and/or dimensions of function
- Axis I-VI
  - personality disorder
    - attachment strategy x predisposing state (eg temperament and epigenetic factors)  
Clarkin

# Diagnoses and strategies

- There is no 1-to-1 correspondence between any diagnoses and attachment strategies or their modifiers.
- Eg School age Assessment of Attachment (SAA) transcripts and Type A, B and C attachment strategies in children with asthma.

# Symptoms and strategies

- Asthma has many facets
  - Cough-variant asthma
    - Role of vagus and parasympathetic reflex
  - Night-time asthma
    - Sensitivity to bronchoconstriction raised at night in everyone
    - Not correlated to allergens in bedding
      - Increased caregiver stress first 6 m. Sandberg
      - Those with asthma associated with such allergens spared when parental role taken over by 'foster-parents' in house Knapp, 1969
- Potential for accessory symptoms to vary in functionality and frequency with strategy

# Stress

- A stress language is more-or-less effective
- Suppression of frustration, aggression and negative affect to powerful other with Type A
  - Depends on effective parasympathetic NS – vagal bias
  - Resetting of norms for  $p\text{CO}_2$
  - Disposing to bronchoconstriction and coughing
- *Uncontrollable* stressors hypothetically associated with learnt helplessness and Dp modifier

# Porge's Polyvagal perspective

- **Vagal system**
  - Bidirectional
    - 80% fibres afferent
  - Motor pathways
    - Nucleus ambiguus regulates striated muscles above diaphragm
      - Incl. bronchi
    - Dorsal motor nucleus regulates below diaphragm
  - Sensory pathways
    - To Medullary nucleus tractus solitarius → Forebrain & Brainstem
- **Regulation of visceral state and affect**

- **System seen to enable visceral homeostasis in the face of challenge**
- Includes facilitating approach and avoidance of others – or immobilization (feign death)
  - And mechanisms for communication
    - Facial muscles
    - Middle ear muscles to facilitate hearing human voice
    - Does yawning play a role in facilitating hearing too?
- **Vagus essential for social communication, self-soothing and inhibiting sympathetic-adrenal influences**
- Involved in regulation of cytokines and HPA axis

- The myelinated vagus functions as a brake to sympathetic activation
  - Withdrawal of myelinated vagal influence
    - fight/flight
    - increased HPA activity
  - Respiratory sinus arrhythmia as measure of the influence the myelinated vagus has on the heart
- Immobilisation dependent on unmyelinated vagus
  - Mobilised if myelinated vagus or sympathetic dominance haven't lead to safety

# Interparental aggression and adrenocortical reactivity

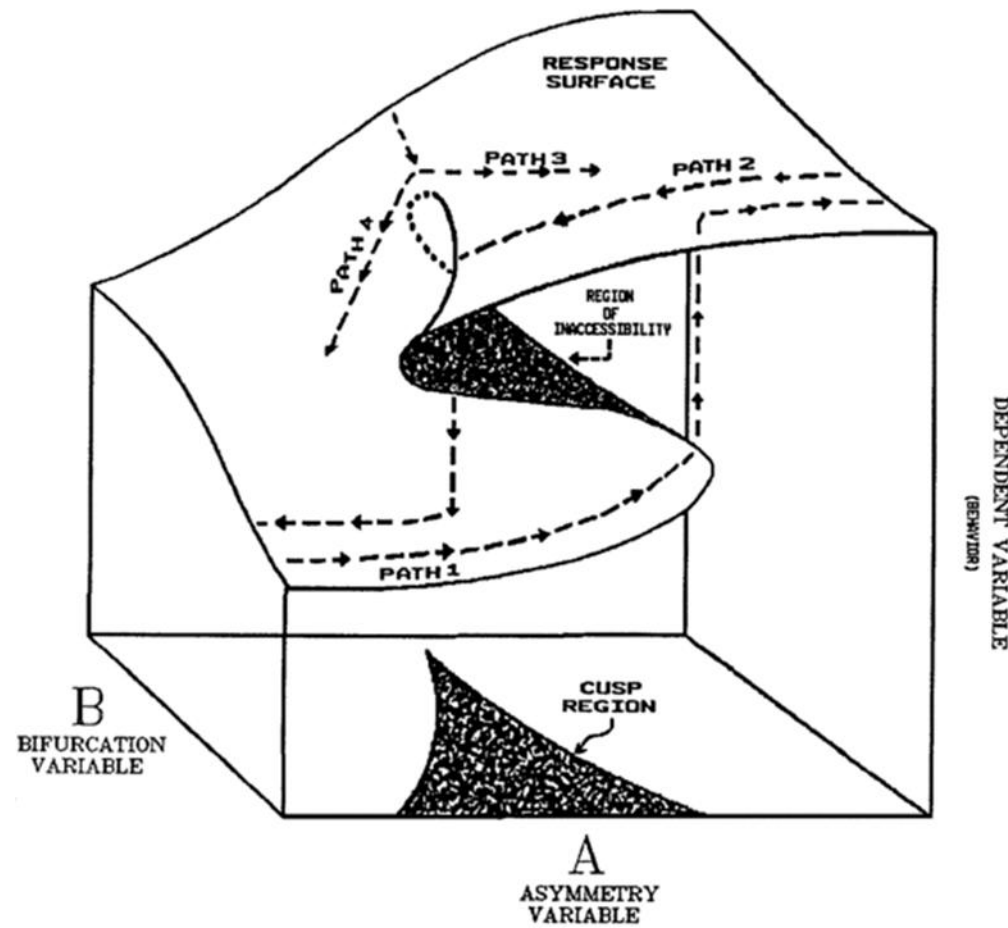
- Subjects 2 yrs old followed for 1 yr
- Interparental aggression predicted greater cortisol reactivity if temperamental inhibition and vigilance
  - Concomitant ↑ internalising symptoms
  - ↓ Attention and hyperactivity difficulties
  - ?Type A
- .... If «bold, aggressive temperamental characteristics» - diminished cortisol reactivity
  - ?Type C

Davies et al, 2011

Can asthma attacks be seen as comparable to 'ina' – the symptom arises as a 'catastrophe' when the trajectory of two opposing forces lead over a cusp?

The stabilising myelin. vagal brake fails and a 'catastrophe' happens.

Does the unmyelinated vagus take over?



# Conditioning of the immune system

Immune function changes on the basis of classical conditioning

- Learning about the temporal relationships between external and internal stimuli
- Associate a specific environmental context or smell/flavour with specific immune challenges
  - Avoid place or food
  - Reduce contact with allergen by coughing/sneezing
  - Prepare body for antigen – mast cell degranulation/antibody production

- Acquisition phase – Evocation phase
- Insular cortex important role in association, retrieval, retention and extinction of taste-visceral memories.
- Central nucleus of amygdala (excl. Hippocampus) involved in acquisition.
- Ventro-medial hypothalamic nuclei involved in evocation of immune system response

*Do children become conditioned to the smell of stressed parents?*

”Pavlovian conditioning can be considered adaptive mechanisms by which an organism learns to anticipate the onset of a biologically important event, and initiates preparatory responses, including lymphoid and myeloid cells based responses.”

Schedlowski & Pacheco-López, 2010

Mechanism of learning in implicit memory systems  
– both procedural and perceptuo-affective

# Asthma, conditioning, epigenetic changes and trauma

- Equifinality – many routes to same phenotype
- Rapid activation and potentially implicit learning about temporal order (Sympahetic Adrenal Medullary axis - SAM) – classical conditioning
- Slow activation and diffuse changes not learnt as associated to people, events or places (Hypothalamic Pituitary Adrenal axis - HPA)
- Chronic stress vs Acute stress
  - Self-report vs Observation

*Watch the polyvagal perspective*

# Consequences of inhibiting aggression

Primarily Type A – uncertain effects Type C even number

- Changes in pCO<sub>2</sub> norms
  - Change in constriction in bronchioli
  - Disposing to asthma
  - Counteracted by 'happiness' and made worse by sadness effect on cholinergic systems
  - Doctor bias towards inhibiting aggression
- Consensual agreement that hidden affect be not identified
- How are Drs likely to respond to pleasing patients?
  - How are parents likely to respond if their child ceases to inhibit aggression?

- **High parental criticism → severity**
  - Is there room to reply in kind or does Type A cope best?
- **Shame increases asthma severity**
  - Shame is known to be associated with Type A
- **Early atopy and asthma disappear if well functioning family with social network – x4 chance by 3yrs**

# Doctors and asthma treatment

- Challenge to gain 'concordance' > compliance
  - "The tyranny of the asthmatic child"
- Challenge to distinguish panic attack and asthma
- 'Low sensitivity' drs interpret personality as reflecting illness severity - **Type A?**
  - Confuse psychological and somatic distress
  - Similar to somatiser's interoceptive confusion
- 'High sensitivity' drs influenced by personality variable – emotional contagion **Type C?**
- 'Balanced' drs base practice on pulmonary function tests

Yellowlees, Kalucy, 1990

# Incomplete treatment adherence

- Medication for asthma in USA
  - regularly 40% adherence
  - in acute attack 70% adherence
- After transplants 70%
- 1993 costs of incomplete adherence in USA = USD 100 billion
- Partially related to Utr in parents of asthmatic pts
- Role of placebo
  - instructions can reduce blood levels of asthma drugs
  - instructions can reverse the expected result of medication

# Asthma

- We forget the affective component in the treatment of asthma partially through the bias in clinicians' attachment strategies, leading to a system error

# Conversion disorder in children

The physiological survival systems are central to understanding – and their responses have been moulded in attachment strategy forms.

- Autonomic system and response to threat
  - hyperarousal
  - hypoarousal
- Freeze or
- Florid fear
  - appeasement behaviour

# Complex somatic symptom disorder

## Conversion disorder

### Freeze

#### Predatory threat

- Vigilance
- Autonomic responses
  - startle
  - low heart rate
  - high skin conductance
- Lack of feeling (pain)
- Primed to respond

Type A  $\pm$  periods when inhibition not maintained

### Appeasement

#### Intrafamilial/network threat

- Signals fear and vulnerability
- Signals need for social contact
- Disarming of aggression via submission
- Excess of feeling

#### Type C

- Feigned helplessness
- Florid strategic expression

# War neuroses

<http://www.youtube.com/watch?v=Ah2f9VabEYE&feature=relmfu>

# Type A response to threat

- Inhibition of displayed emotion
  - fear, anger, desire for comfort and pain
  - lack of clarity in the associated feelings with these emotions
- Answers correctly to 'How are you?' with 'I don't know'
  - but can answer by pointing to the problem
  - tends to inhibitory types of conversion disorder
- Can display false positive affect
  - problem to identify hidden affect

Baby P

'[ina]'

*Intruded* taboo negative affect



Dp Utr A+ [ina]aggression

Behaviour ceases to be strategic with learnt helplessness/depression, unresolved trauma or loss and 'ina'

# Type C response to threat

- Exaggerated partial display of emotion
  - Predominantly fear/vulnerability oscillating with anger
  - Predominantly anger oscillating with fear/vulnerability
- Presents lack of clarity in the total picture
- Answers with emphasis on the affect which elicits greatest response – thus confusing self, parents and doctor

# Type C response to threat

- Behaviour forces a response
- Neglect information about precipitating factors
- See themselves as victims and others as responsible for finding a solution
- Can be incorporated in family's secondary gain and so appeases parents.

# Understanding Chronic fatigue syndrome with DMM

# Parents and Health workers

Disposed to

- respond to particular emotions
- overlook other emotions.
  - What frequencies does the microphone pick up?
- Attribute particular feelings
- Pain in the head, teeth, back and legs ('growing pains') run in families
  - What turns up the amplifier?

Variously disposed to explore

- Why now? What is determining distance between patient and VIP?
- Triggers and context factors
- Whether it is «in the genes»

# ”Sykdom” (*Norwegian*) The domain of 'sickness'

- Physiology
    - background emotion
      - disease/disorder - emotion
  - Behaviour
    - procedural
  - Subjective experience
    - illness
      - confused and exaggerated/split
  - Words
    - semantic
  - What is conveyed about illness
    - system consequence
      - determined by what 'balances' VIP
- There is no 'a priori' reason for these to be coherent given the role played by parental and health workers' DRs in interpretation.

# Yawning

Yawning  
relieves  
stress,

And is contagious!

**It does not only mean  
you are lacking sleep.**

# Fatigue – CFS & ME. What do we know?

- Elevated premorbid stress Kato et al 2006
- Preceding acute physical or psychological stress (loss)
  - Multiple types of childhood trauma assoc with altered emotional state Heim et al 2006
- Probability effects of epigenetic factors and genes acting via personality factors Kato et al 2006
- Moral debate concerning stigma and shame: **what is not being talked about?** (police protection to UK psychiatrist who says psychiatry has something useful to say)
- Symptoms equated with signs
- Diagnosis of ME assoc with worse prognosis than CFS Hamilton et al 2005
- Better outcome when not attributed to physical causes
  - **AND psychiatric disorder predicted worse outcome**

# A warning from the MBD story

- MBD went from Minimal Brain Dysfunction to Minimal Brain Disorder to Minimal Brain Disease → ADHD
  - → increasing focus on the basic phenomenology and symptoms incl. 'irritability'
  - → and the contingencies to the behaviour (incl. Reward/punishment)
- ME has gone from Myalgic encephalitis to Myalgic encephalopathy → CFS (hopefully)

# Stress symptoms as potential signs of disease

- tired all the time
- headache
- backache
- constipation or diarrhoea
- sweating
- dry mouth
- pressure in the chest
- feeling sick, vomiting
- sleep disturbance
- desire for more or less food
- obsessions
- guilt feelings
- irritability
- poor concentration
- poor shortterm memory
- catastrophe thinking
- reduced libido
- etc

These were present for the patient.

# Clinicians and CFS/ME

Contribute to persistence through

- Unnecessary diagnostic procedures
- Persistently *suggesting* psychological causes
- By not acknowledging CFS as a diagnosis

Prins, van der Meer, Bleijenberg, 2006 review in *Lancet*

# What is CFS?

- A «feedback» disorder which reflects a system error involving health professionals and all who care for the patient.
- Subsequently internalised by the patient
  - The prognosis for adult patients is much worse than for children and adolescents
- A system error coherent with information processing biases inherent in the attachment strategies.
- A real condition maintained by «turning the amplifier up high & retaining closeness between a 'noisy system'/patient and a too sensitive carer/health professional»
  - Fed by concern and good intentions.

# Fabricated or induced illness

Previously Munchausen-syndrome-by-proxy

- The state of the child is manipulated to fit with the attribution which 'needs' to be made.
- The child is involved in a web of deceit and abuse.
- Mothers examined for court reports:
  - Unresolved early abuse
  - History of neglect
  - Loss of a parent before aged 11 yrs – 93%
  - Somatoform disorder – 57-75% currently
  - Factitious disorder – 64% past or current
  - Pseudo-epilepsy – 32%
  - Factitious asthma
  - Pathological lying (pseudologia fantastica) – 61%
  - False pregnancy – 19%
- Prevention: Always include the childcare in evaluation of an adult with somatisation.

Bass & Jones, 2011

# Morgellons

«....this weird incurable disease that seems like it's from outer space... Fibres in a variety of colours protrude out of my skin: they cannot be forensically identified as animal, vegetable or mineral. Morgellons is a slow, unpredictable killer – a terrorist disease. It will blow up one of your organs, leaving you in bed for a year.»

Joni Mitchell

# Alexithymia

- Lack of available affect language
- Freeze and associated lack of feeling
- Associated with over-active 'bodily brain regions'
  - somatotopical cortical areas

Karlsson, Stenman, 2008

- See also Somatoform dissociation.
- Secondary alexithymia
  - Losing their language for feelings states during stay on intensive care wards
  - Coherent with context for freeze response

# Somatising:

## The most demanding diagnosis in medicine

- Use of admission + out-patients x9 rest of population
- 25% all GP appointments (10-33%)
- 50% all hospital out-patient appointments (35-53% first time appts.)
- 'Doctor shopping'
  - consultations are unsatisfactory for all, yet patients do not give up on the possibilities of renewed complaining
    - new appointments with new doctors....
    - large number of investigations
- Social security costs
  - in 6m. cost UK society £60.000 (2003)
    - 30% for treatment in NHS, UK.

## CFS costs

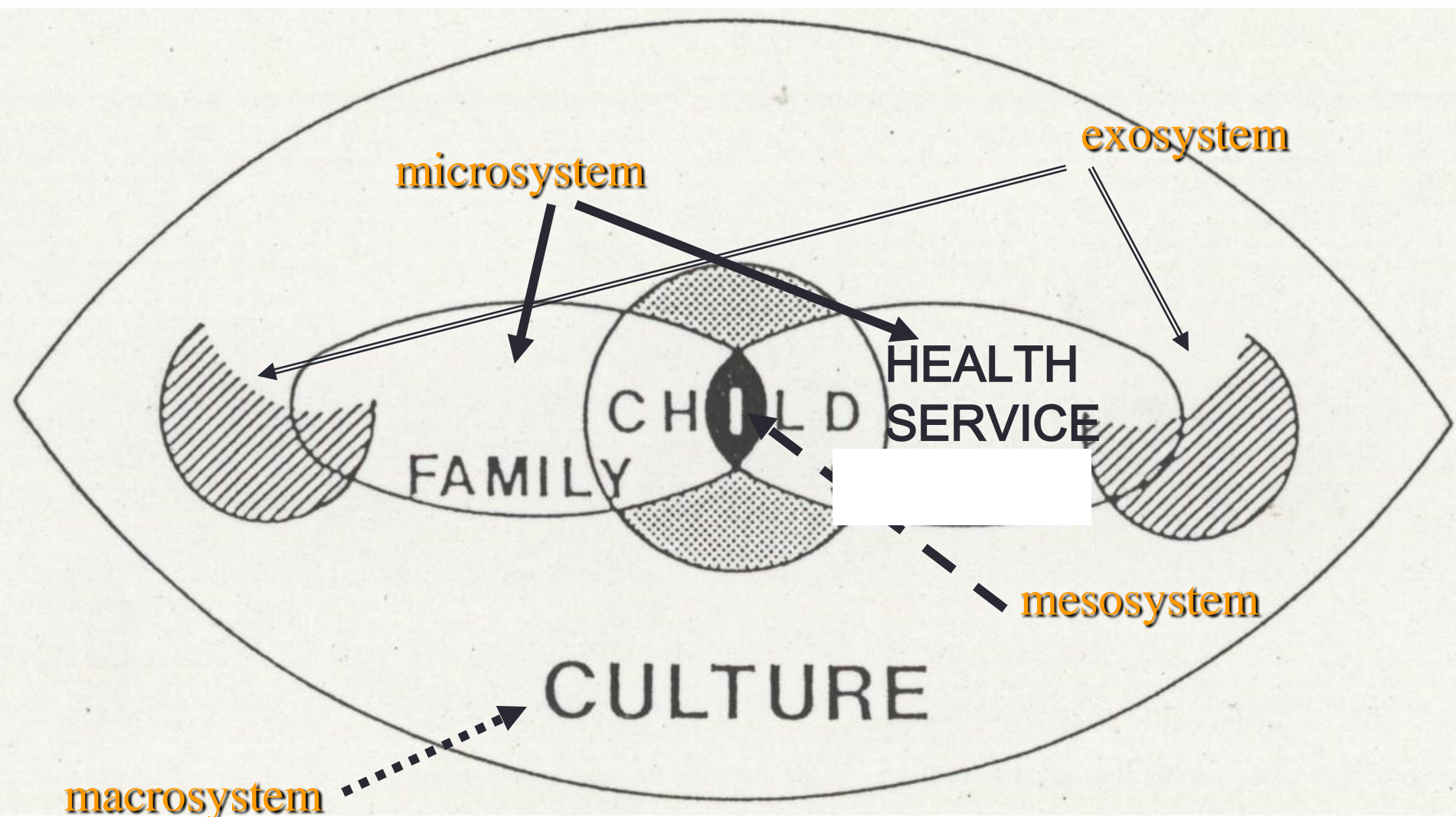
- US 2008
- \$9.1 bn due to loss of productivity/yr
- \$7-9 bn health care costs/yr

# The systemic validity of somatic symptoms

Adapted from Dialectic behaviour therapy

- Find the wisdom, correctness or value in patients' symptoms – their language disposition
  - emotional expression,
  - cognitive understanding
  - associated behavioural responses
- the Ecological validity (context of current events - Bronfenbrenner, 1979)

Need systemic analyses which address multi-causality.



Bronfenbrenner U. (1979) The ecology of human development. Harvard Univ Press

# The gender dilemma

**Male** - the most vulnerable.  
**Female** - most vulnerability attributed to them.

- Hypochondriasis M=F
- Body dysmorphic disorder M=F
- Pain disorder M<F
- Conversion disorder
- Undifferentiated somatoform disorder
- Somatization disorder

# MEDICALLY UNEXPLAINED SYMPTOMS, SOMATISATION AND BODILY DISTRESS: DEVELOPING BETTER CLINICAL SERVICES

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Ed Francis Creed, Peter Henningsen, and  
Per Fink

2011, CUP, Cambridge

*Bodily distress syndrome*

# Tormented hope: Nine hypochondriac lives

Brian Dillon

”It may even appear for the hypochondriac that the solidity of a real disease is preferable to the fog of optimism and uncertainty that passes for most of us, most of the time, as good health”.

- the desire for an identity label

Thoughts ”lack the lightness or velocity to escape the gravitational pull of your fear”.

The inability to tolerate uncertainty.

# Somatising

A classification not based on DMM: 4 types

- Culturally normal
- Somatic presenter
- Functional somatising
- Hypochondriacal somatising
- Repetition of your language of dis-ease
- Transmitted from generation to generation – as English/French
  - Bretagne gaelic to the average Frenchman

# Validation of symptoms

- Culturally normal
- ❖ No need to validate – shared in macrosystem
  - Problem for immigrants – chilblains and spasmophilia
    - understanding the dangers/health of Canadian 'fresh air'
- Somatic presenter
  - Accepts clinician's re-definition of complaint and category of response = client > patient
    - Not necessarily part of a type A strategy
- ❖ Validating symptoms psychoeducationally

# Validation of symptoms<sup>2</sup>

- Functional somatiser
- ❖ Validate in terms of development (3 generations)
  - Coherent with maximising available self-protection in microsystem where learnt language of dis-ease
  - Clarification of distinction between eliciting care and requiring treatment (*difficulty of problem*)
  - Patient > client
  - 'Not necessarily' part of type C strategy

# Validation of symptoms<sup>2</sup>

- Hypochondriacal somatiser
- ❖ Validated in terms of an adequate response to a previous situation which lead to learning which cannot just be shrugged off – Utr/I
  - Preoccupied with the continuing potential threat in gradually lesser degrees of the symptom – *kindling* or *Type C*
  - Implicit learning (imaged and procedural) which cannot be consciously remembered or unlearnt
    - Psychoeducative approach + alternative implicit learning
  - Treatment dependent on motivation for top-down control eg exposure
  - Patient > client

Somatosensory  
amplification

# Consequences of neglect and abuse

- 70% of mothers who had been abused did not abuse their children
- They were all vulnerable to somatise.
- Interoceptive confusion
- Somatic images of distress, fear and vulnerability which are often denied
  - the 'music' is seen by others but not heard by pt.
- **Need to validate the inability to feel comfortable without a disorder/disease diagnosis**
- *But will this be coherent with aim of a classic clinician?*

# Utr - Trauma and the immune system

- Epigenetic signatures for PTSD
  - Independent of associated MDD or GAD
  - X7 genes with significant correlations to **number** of potentially traumatic events
- Immune-related methylation profiles with PTSD
- Compromised immune reactivity
- Cluster of genes for sensory perception of sound
  - hypersensitivity to contextual threat