Medication ‘treatment’: the major issues in child and adolescent patients with mental ‘illness’

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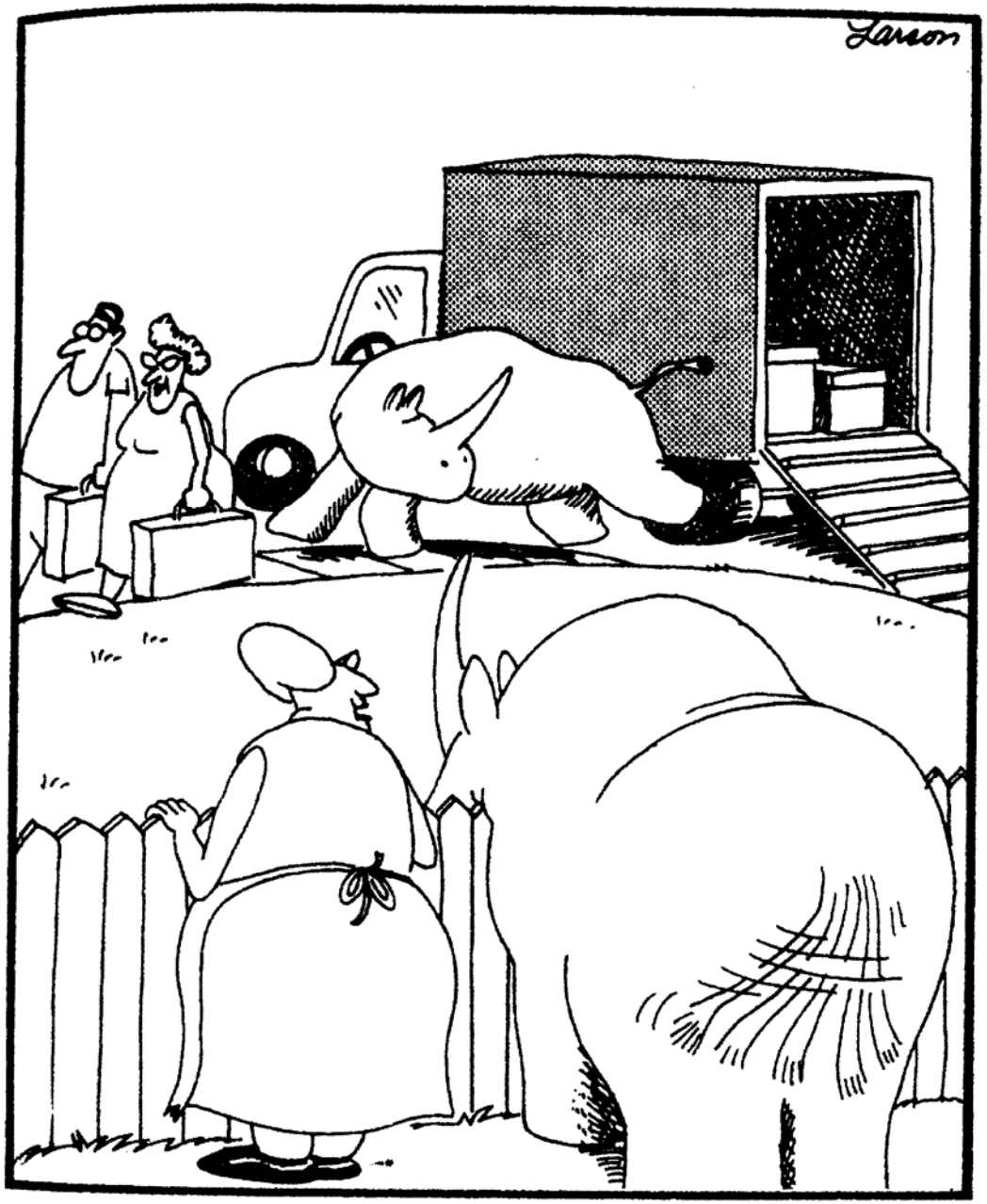
Outline of Presentation

- **Definition of mental illness, treatment, and developmental context**

- **Overview of the field of child and adolescent psychiatry**

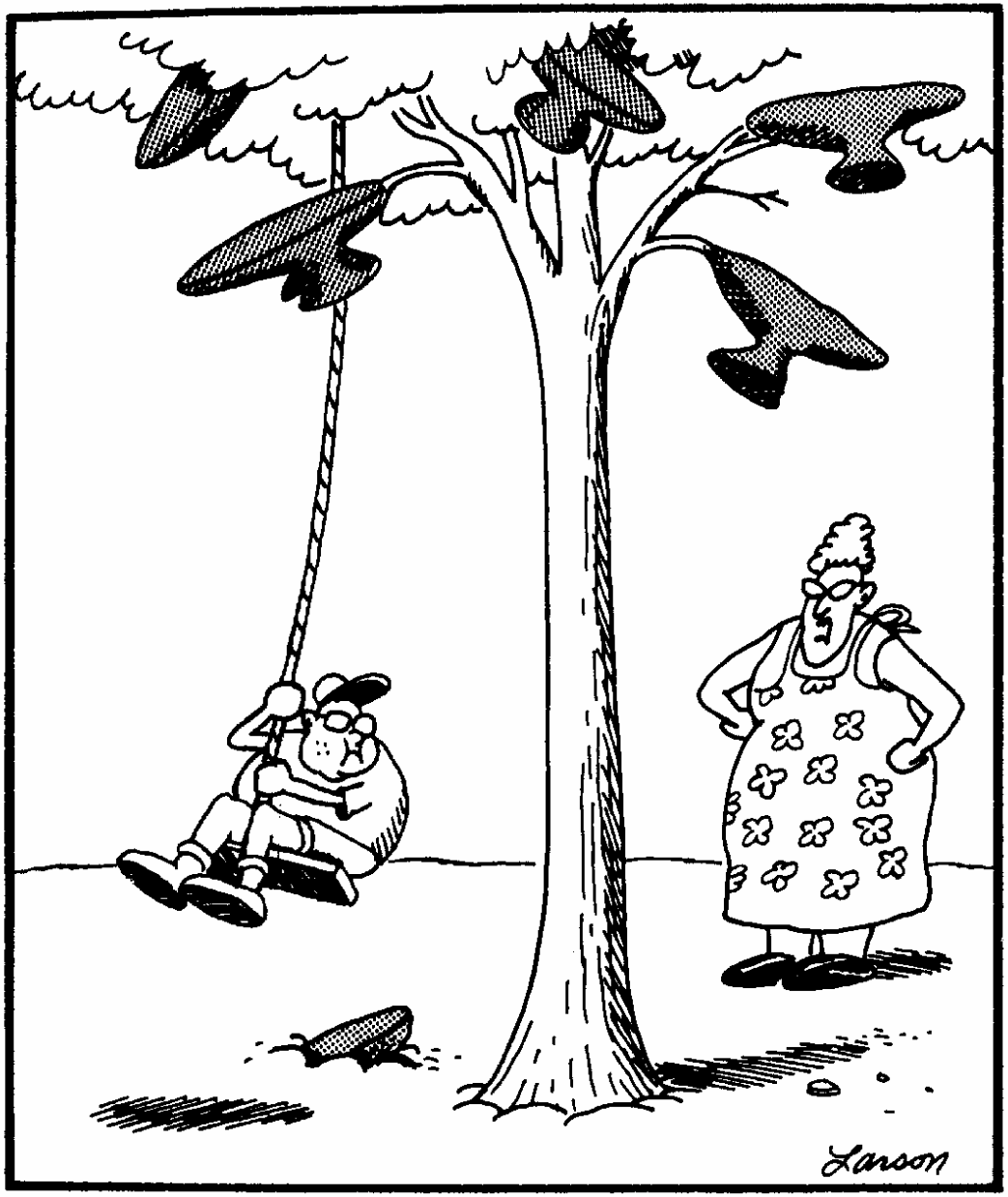
- **The clinical problem of comorbidity**

- **Future directions**



"Well, well, King . . . looks like the new neighbors have brought a friend for you, too."

"Hello, Emily. This is Gladys Murphy up the street. Fine, thanks . . . Say, could you go to your window and describe what's in my front yard?"



"All right, Billy, you just go right ahead! . . . I've warned you enough times about playing under the anvil tree!"

Attention Deficit Hyperactivity Disorder (ADHD)

DSM-IV CRITERIA

-six or more symptoms, at least six months, maladaptive/inconsistent with developmental level

-inattention dimension and/or hyperactivity-impulsivity dimension

-evident at least two settings

-onset before seven years of age

-impairment social, academic, occupational functioning

-symptoms not due to a PDD, Psychotic, Mood, or Anxiety Disorder

Definition (DSM-IV)

Major depressive disorder – one or more major depressive episode(s) characterized by the following:
period of two weeks or more
-depressed mood predominant and/or
-loss of interest or pleasure
-3 or 4 or more of the following;
feelings of worthlessness or excessive or inappropriate guilt, >5% weight change in a given month, in/hyper somnia, psychomotor agitation/retardation, anergia (fatigue), decreased concentration or ability to think or decisiveness, recurrent thoughts of death, suicidal ideation, suicide plan or suicide attempt
symptoms cause impairment in interpersonal, social, academic, occupational functioning
not due to a substance, medical condition or bereavement

Definition (DSM-IV)

Dysthymic disorder is characterized by the following:

2 years or more (most of the day, for more days than not),
<2 months absence in a given year

-depressed mood predominant

-2 or more of the following:

feelings of hopelessness, low self-esteem

appetite change, in/hyper somnia, anergia (fatigue),

decreased concentration or decisiveness

no major depressive episode evident in first year of the symptoms

symptoms cause impairment in interpersonal, social, academic, occupational functioning

not due to a substance, medical condition or bereavement

Definition (DSM-IV)

Anxiety disorders are characterized by the following:

Generalized Anxiety Disorder: > 6 months anxiety/worries
Specific Phobia: specific fear stimulus
Social Phobia: interpersonal sensitivity
Obsessive compulsive disorder: presence of obsessions/compulsions
Panic disorder: panic attacks with characteristic cognitions

symptoms cause impairment in interpersonal, social, academic, occupational functioning
not due to a substance or medical condition

Mental illness versus disorder

-individual's response to being in the 'sick role'

-interpersonal, family and social context is significant

-developmental stage is important

Medication and/or psychological/social treatment

-‘treatment’ involves minimizing risk and/or
maximizing resilience

-success determined by
the comprehensiveness of the assessment process,
the preparation for the treatment process,
the ongoing monitoring process

Psychodynamic theory and practice

- ***valid focus*** on the human being as subject and inter-subjective states

primarily concerned with the ***interaction between*** the conscious and unconscious aspects of the human mind

- systematic, formulated and scientific knowledge base

-free association and interpretation are key assessment and treatment tools, respectively

-monitoring of treatment resides primarily with the individual in the treatment process rather than with the clinician

-no clear biological risk factors or resilience factors identified

Family and social systems theory and practice

- ***valid focus*** on human interpersonal systems

primarily concerned with the ***interdependence of relationships*** in an interpersonal system governed by processes of circular causality and homeostasis

- systematic, formulated and scientific knowledge base
- aims of treatment are symptom removal from an identified individual; decreased family distress; improved communication; increased flexibility; increased problem solving

- monitoring of treatment resides primarily with the individual in the treatment process rather than with the clinician
- no clear biological risk factors or resilience factors identified (Hayes, 1991)

Developmental psychopathology

- equifinality:
more than one precursor/antecedent being associated with a given factor

ADHD-CT

ANX **EF** **LBLD**

-multifinality:
a given precursor/antecedent being associated with multiple factors

ANX **ADHD-CT** **ODD/CD**

LBLD

Developmental psychopathology

-risk factors and resilience factors are ***interdependent*** in a given individual (eg a hostile critical primary caregiver relationship may be a risk factor at age 3 and a resilience factor at age 13 in a given individual)

-assessment and treatment involves [1] identifying biological, psychological, social, cultural and developmental risk and resilience factors and their ***relative importance*** in a given individual and [2] ***biological and psychological*** treatments used alone or in conjunction to achieve specific goals informed by the relative priorities of these risk and resilience factors

-monitoring of treatment resides primarily with the ***clinician*** in association with the individual in the treatment process

-clear biological risk factors or resilience factors identified

Currently,

the first two ideographic theoretical influences are in the ascendancy in the field although the nomothetic developmental psychopathology model is gaining credibility

its credibility is primarily due to its consonance with the international movement towards understandable and complimentary modes of service delivery in paediatric, youth and adult psychiatric services

Types of ADHD

-combined type

-predominantly inattentive type

-predominantly hyperactive-impulsive type

Comorbidity of ADHD

-language-based learning disorders

-oppositional-defiant or conduct disorders

-anxiety and depressive symptoms through to disorders

-clumsiness through to developmental coordination disorder

The conceptual problem of comorbidity

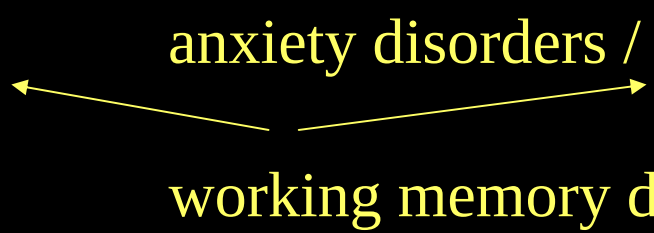
- comorbid disorders are separate disorders

- comorbid disorders are secondary disorders

ADHD ⟶ anxiety disorders / depressive disorders

ADHD ⟵ anxiety disorders / depressive disorders

- comorbid disorders share common antecedent



The conceptual problem of comorbidity

- comorbid disorders are separate disorders

- overwhelming evidence of a greater than chance association of ADHD and anxiety disorders / depressive disorders

The conceptual problem of comorbidity

- comorbid disorders are secondary disorders

ADHD ⟶ anxiety disorders / depressive disorders

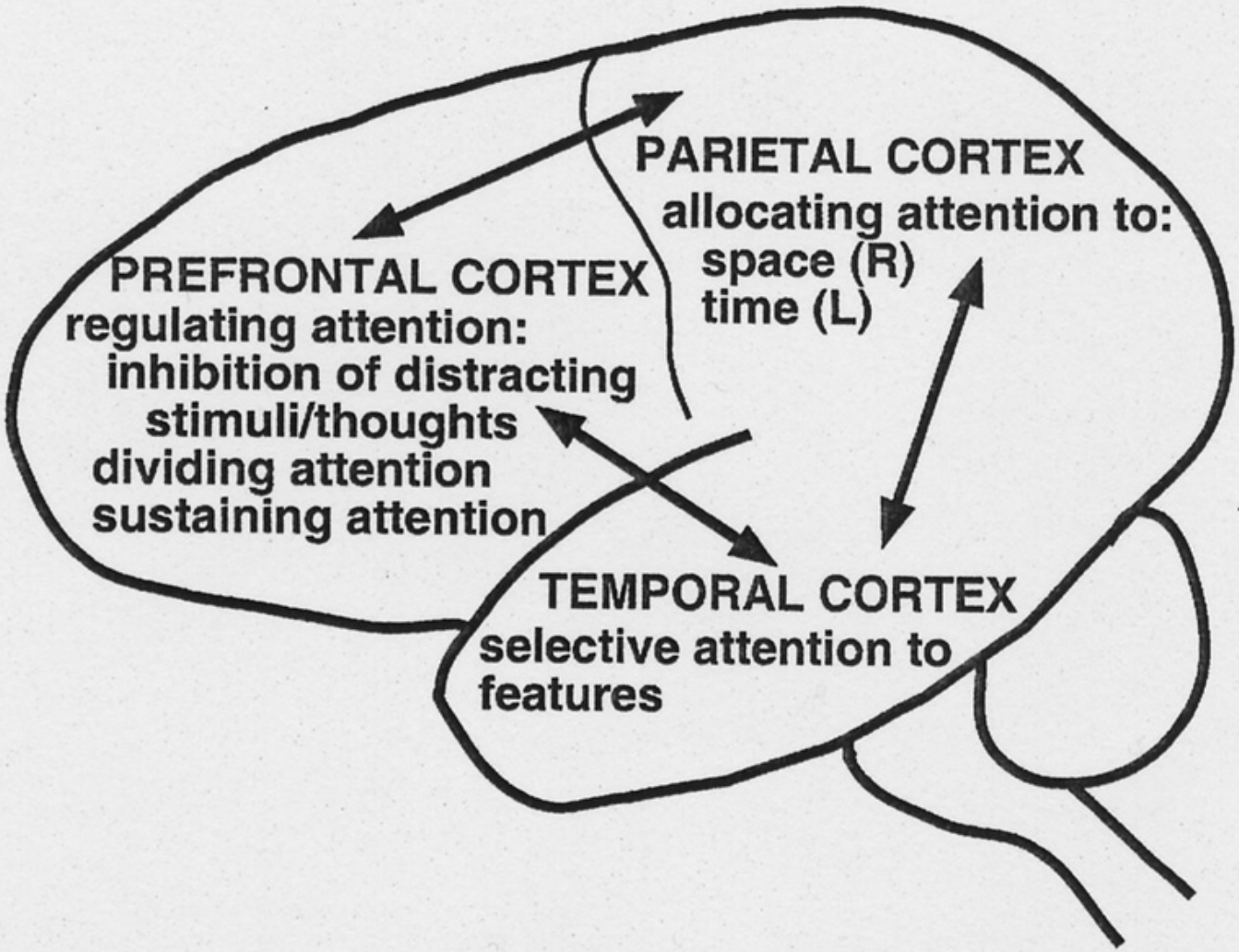


FIGURE 8.1 The prefrontal, parietal, and temporal association cortices form interconnected networks that play complementary roles in attentional processing.

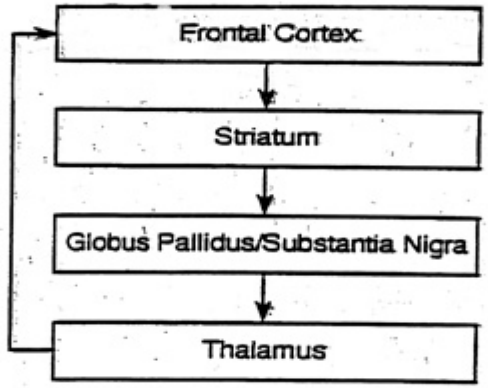


Figure 16.1. Central organisation of the frontal–subcortical circuits.

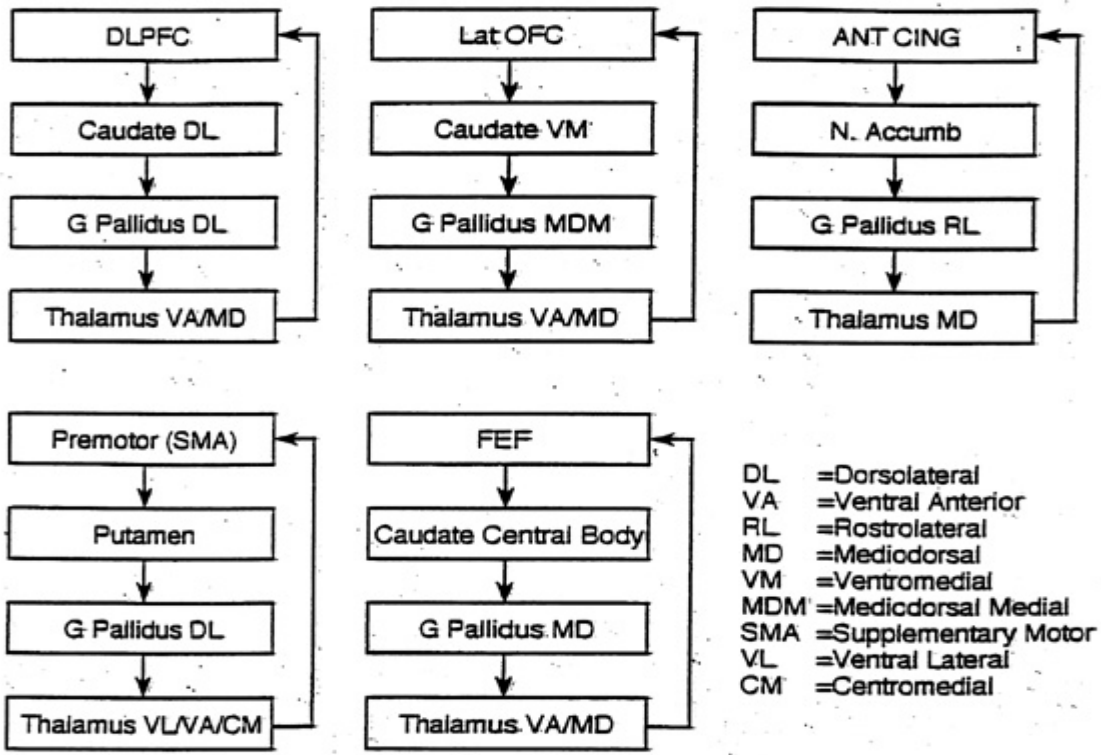
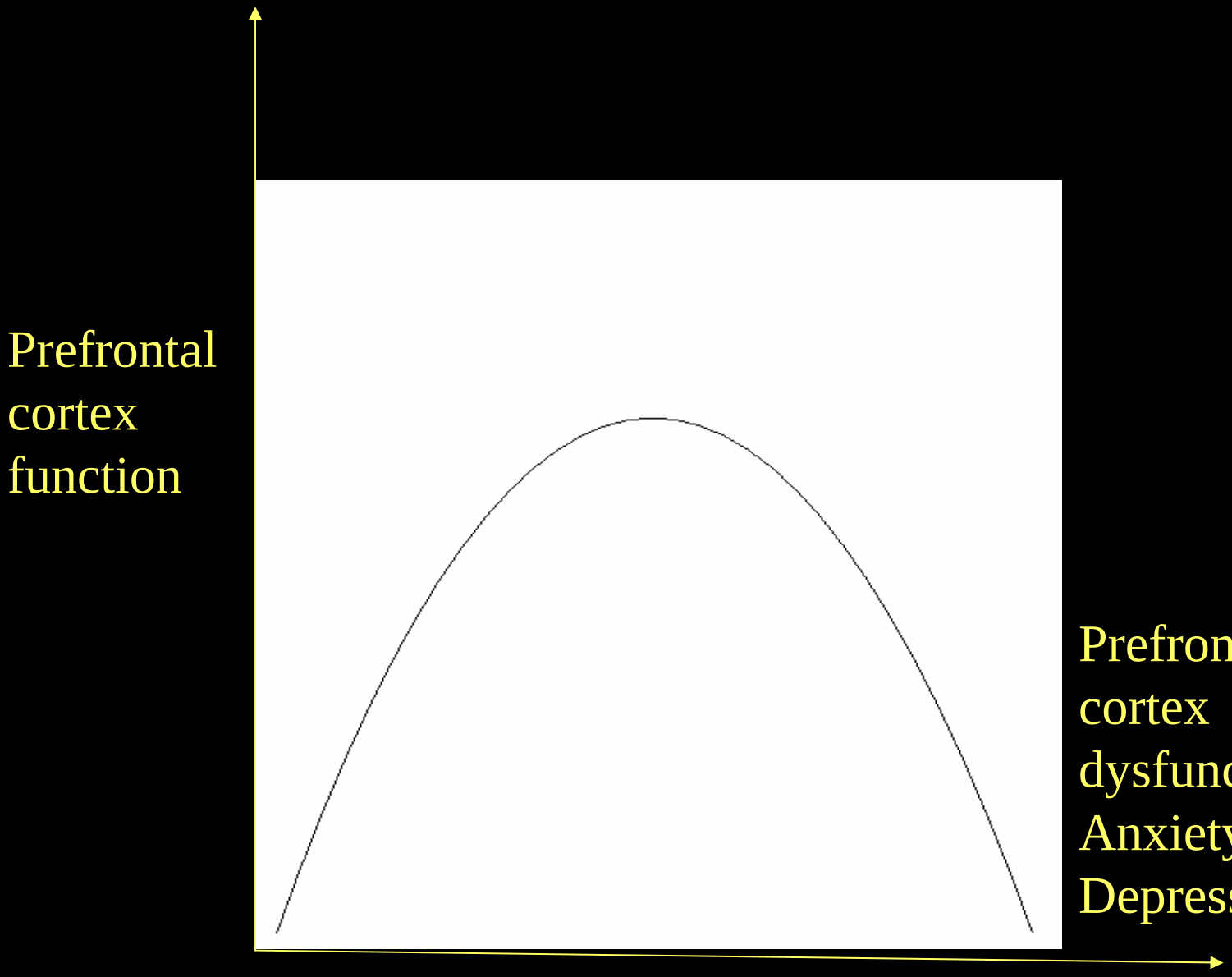


Figure 16.2. Organisation of the frontal-subcortical circuits (see also Cummings, 1993). (NB: indirect circuits of the substantia nigra and subthalamic nucleus are not shown.)

The conceptual problem of comorbidity

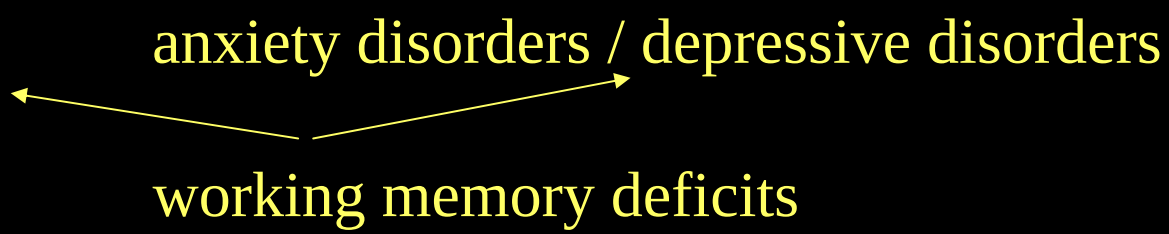
- comorbid disorders are secondary disorders

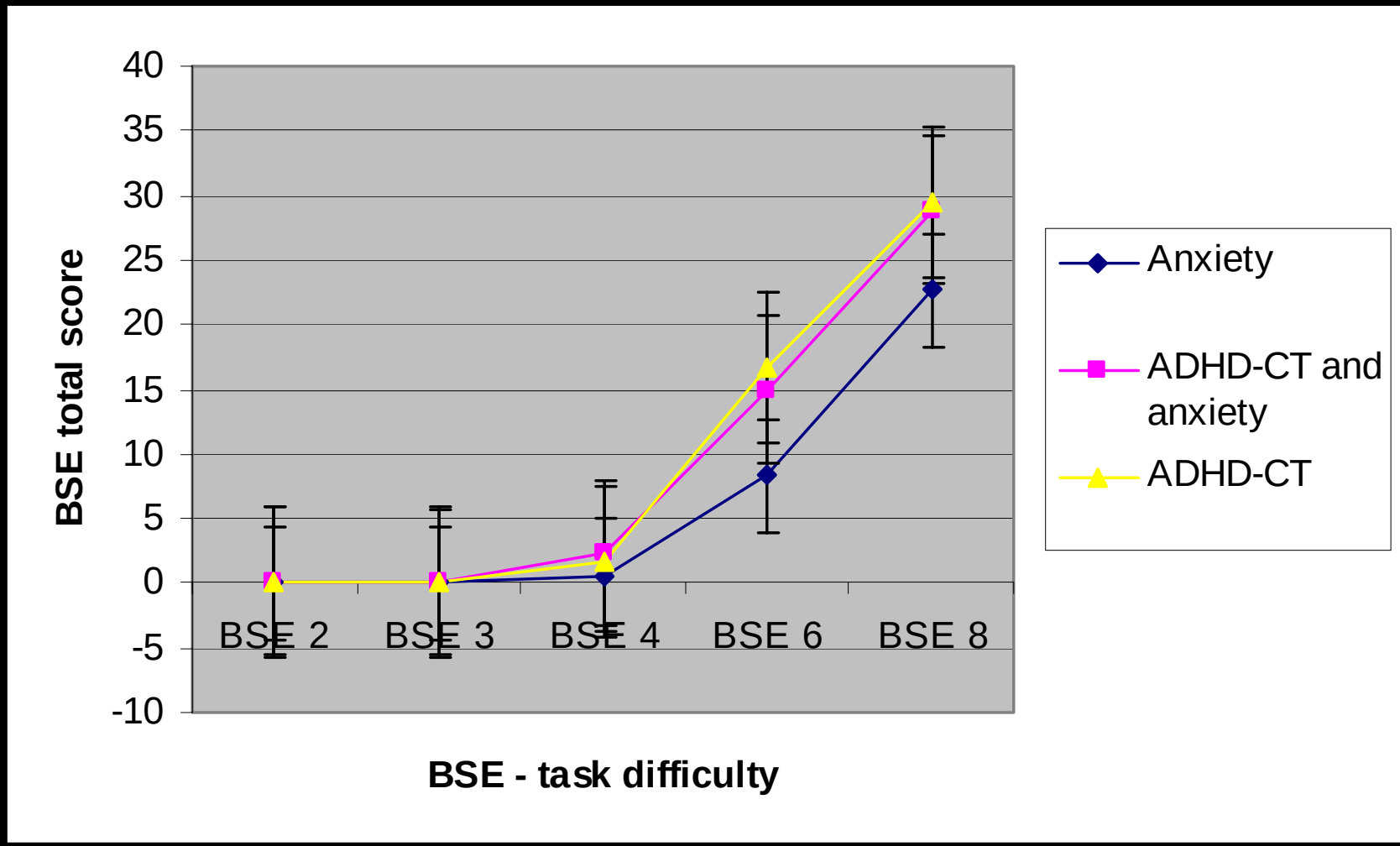
ADHD ⟵ anxiety disorders / depressive disorders


Prefrontal cortex function
Prefrontal cortex dysfunction
Anxiety – low/high
Depression - low
Behavioural symptom level

The conceptual problem of comorbidity

- comorbid disorders share common antecedent




40
35
30
25
20
15
10
5
0
-5
-10
BSE total score
BSE 2
BSE 3
BSE 4
BSE 6
BSE 8
BSE - task difficulty
Anxiety
ADHD-CT and anxiety
ADHD-CT

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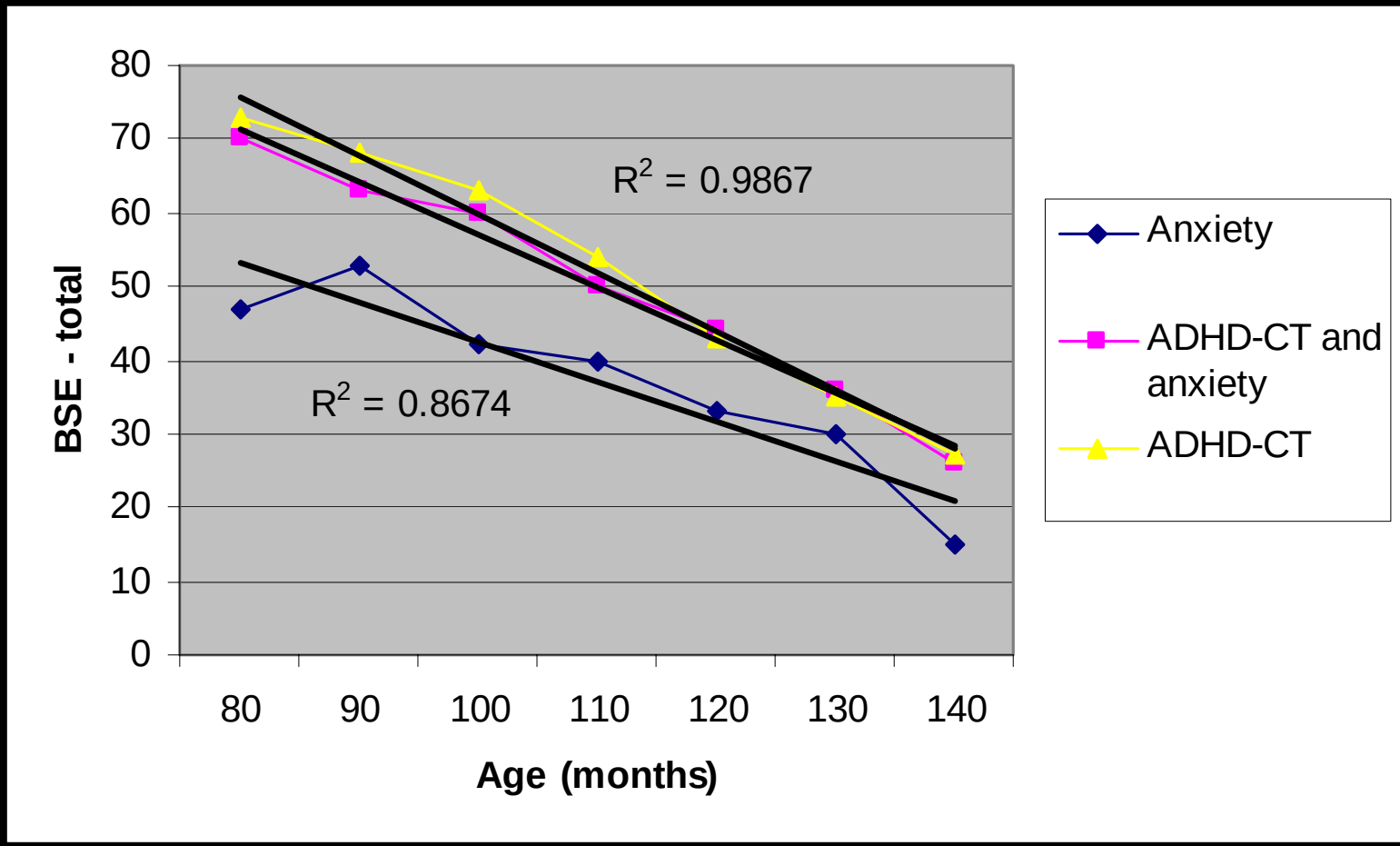
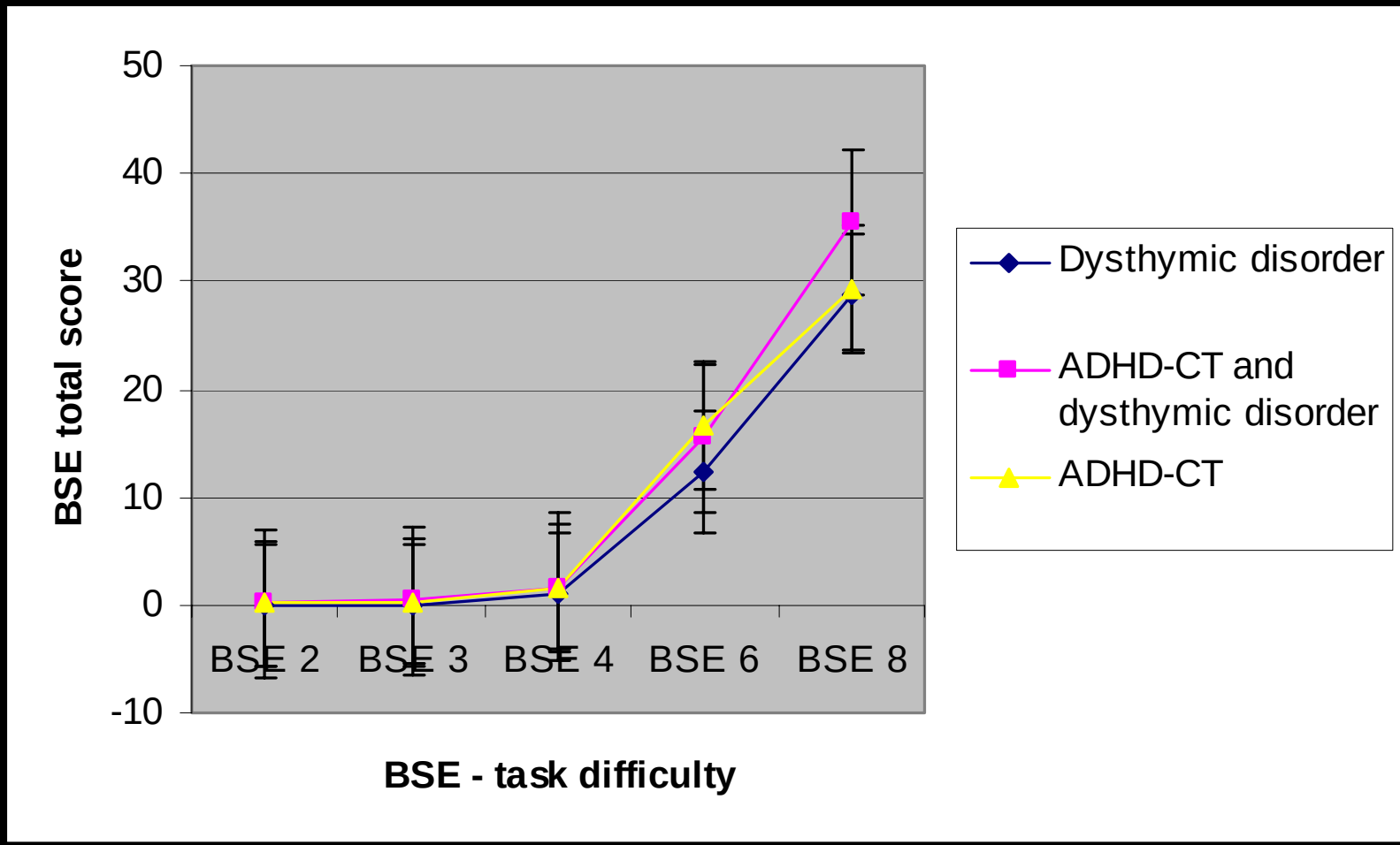
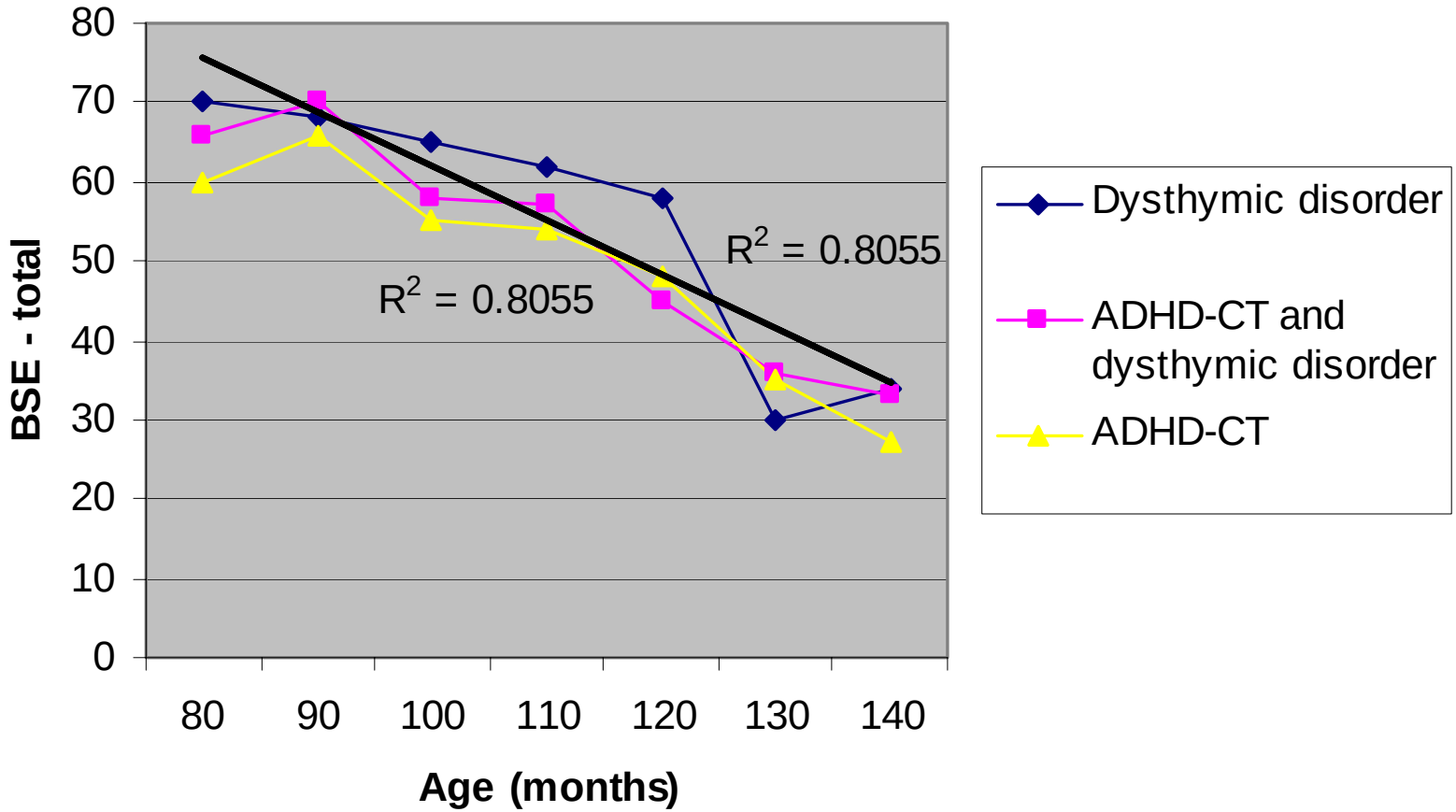

80
70
60
50
40
30
20
10
0
BSE - total
80
90
100
110
120
130
140
Age (months)
R2 = 0.9867
R2 = 0.8674
Anxiety
ADHD-CT and anxiety
ADHD-CT


50
40
30
20
10
0
-10
BSE total score
BSE 2
BSE 3
BSE 4
BSE 6
BSE 8
BSE - task difficulty
Dysthymic disorder
ADHD-CT and dysthymic disorder
ADHD-CT


80
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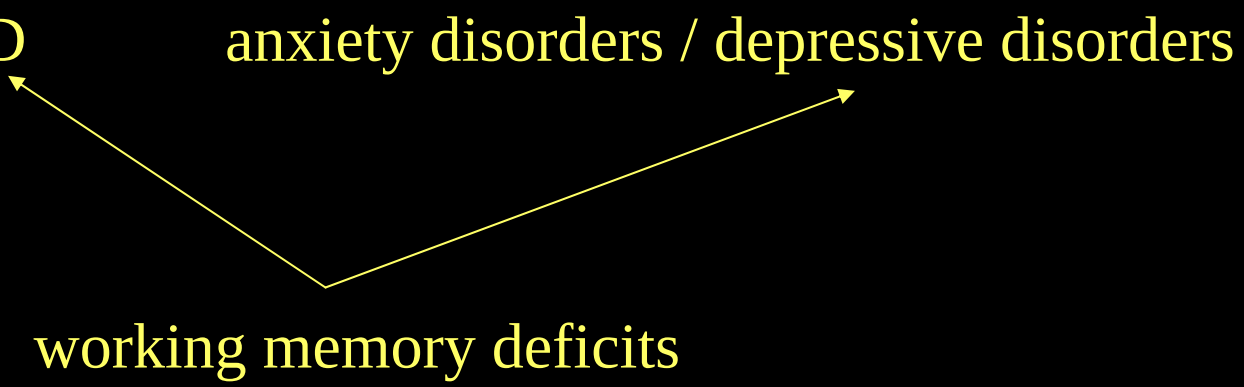
0
BSE - total
80
90
100
110
120
130
140
Age (months)
R2 = 0.8055
R2 = 0.8055
Dysthymic disorder
ADHD-CT and dysthymic disorder
ADHD-CT

The conceptual problem of comorbidity

- comorbid disorders share common antecedent



The clinical problem of comorbidity

-Summary to date:

impairment governs referral

comorbidity is common

relatively specific and common risk factors emerging

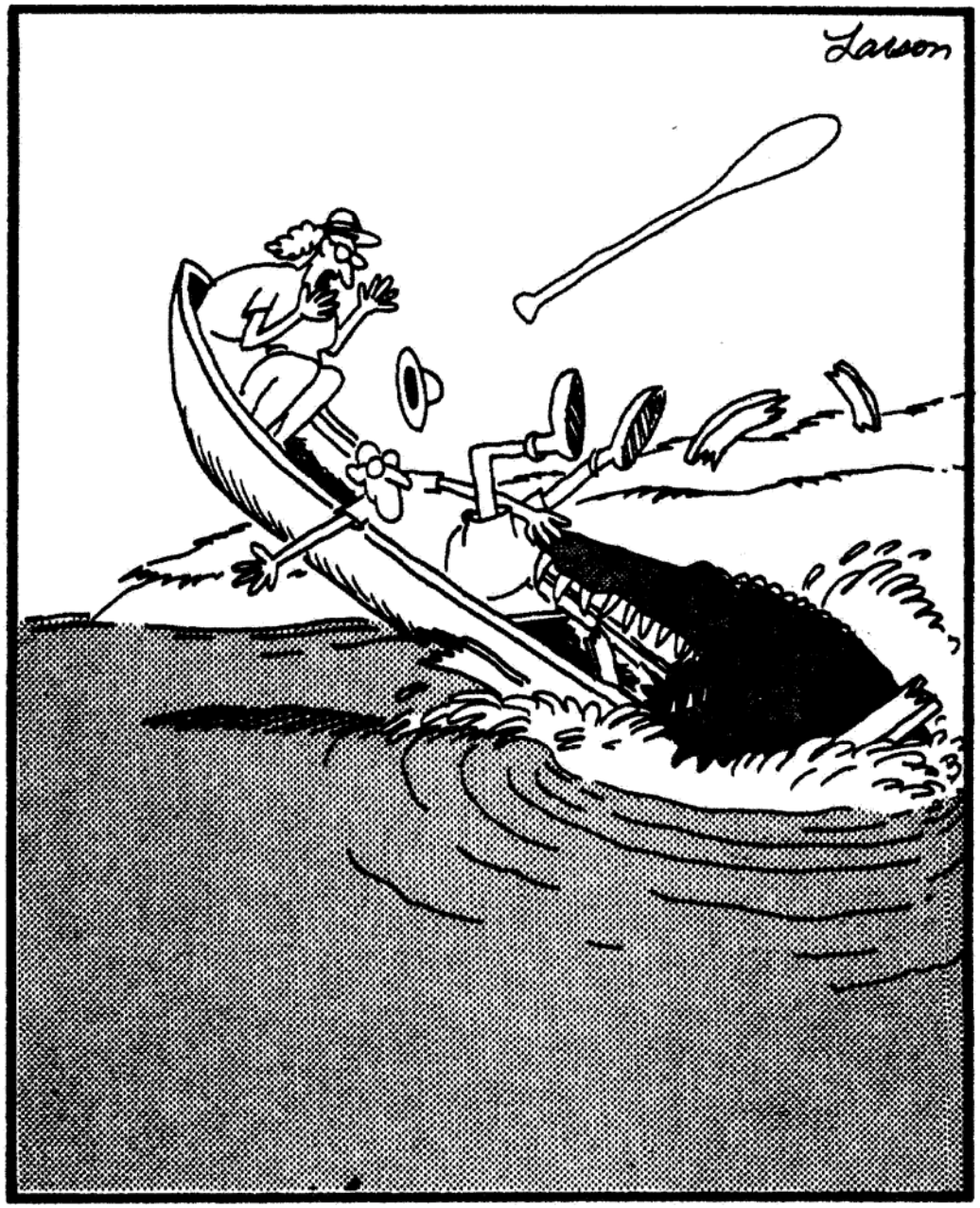
brain systems studied affected by ‘biological’ and ‘environmental’ factors

Developmental psychopathology

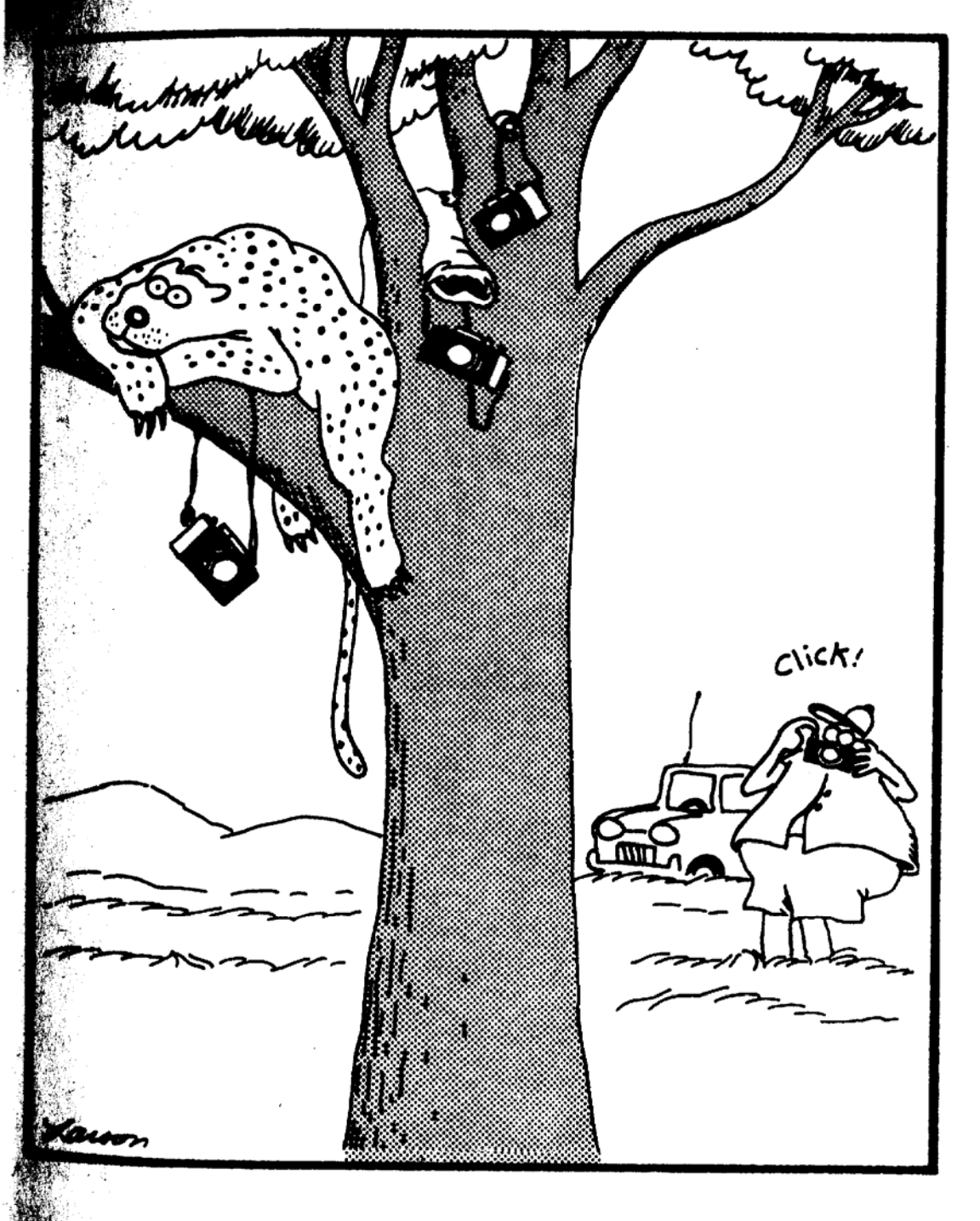
-assessment and treatment involves [1] identifying biological, psychological, social, cultural and developmental risk and resilience factors and their ***relative importance*** in a given individual and [2] ***biological and psychological*** treatments used alone or in conjunction to achieve specific goals informed by the relative priorities of these risk and resilience factors

-monitoring of treatment resides primarily with the ***clinician*** in association with the individual in the treatment process

-clear biological risk factors or resilience factors identified



"Rub his belly, Ernie! Rub his belly!"


Click!

Key targets of psychological and biological treatment

Executive functioning

Response inhibition: motor and cognition
optimise response speed and accuracy

Working memory: verbal and visuospatial
optimise span and strategy

Key targets of psychological and biological treatment

Mood dysregulation:	**decrease irritability** **increase emotional salience**
Arousal dysregulation:	**optimise physiological arousal** **optimise habituation**

Useful medication approaches

Response inhibition:

motor and cognition	stimulant medication -linear dose response
speed and accuracy	clonidine higher dose

Working memory:

span	stimulant medication -inverted parabolic response
strategy	stimulant medication -linear dose response clonidine higher dose

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Useful medication approaches

Mood dysregulation:

irritability	stimulant medication
	SSRI
	TCA
	antipsychotic medication
emotional salience	stimulant medication
	SSRI?
	TCA?

Useful medication approaches

Arousal regulation:

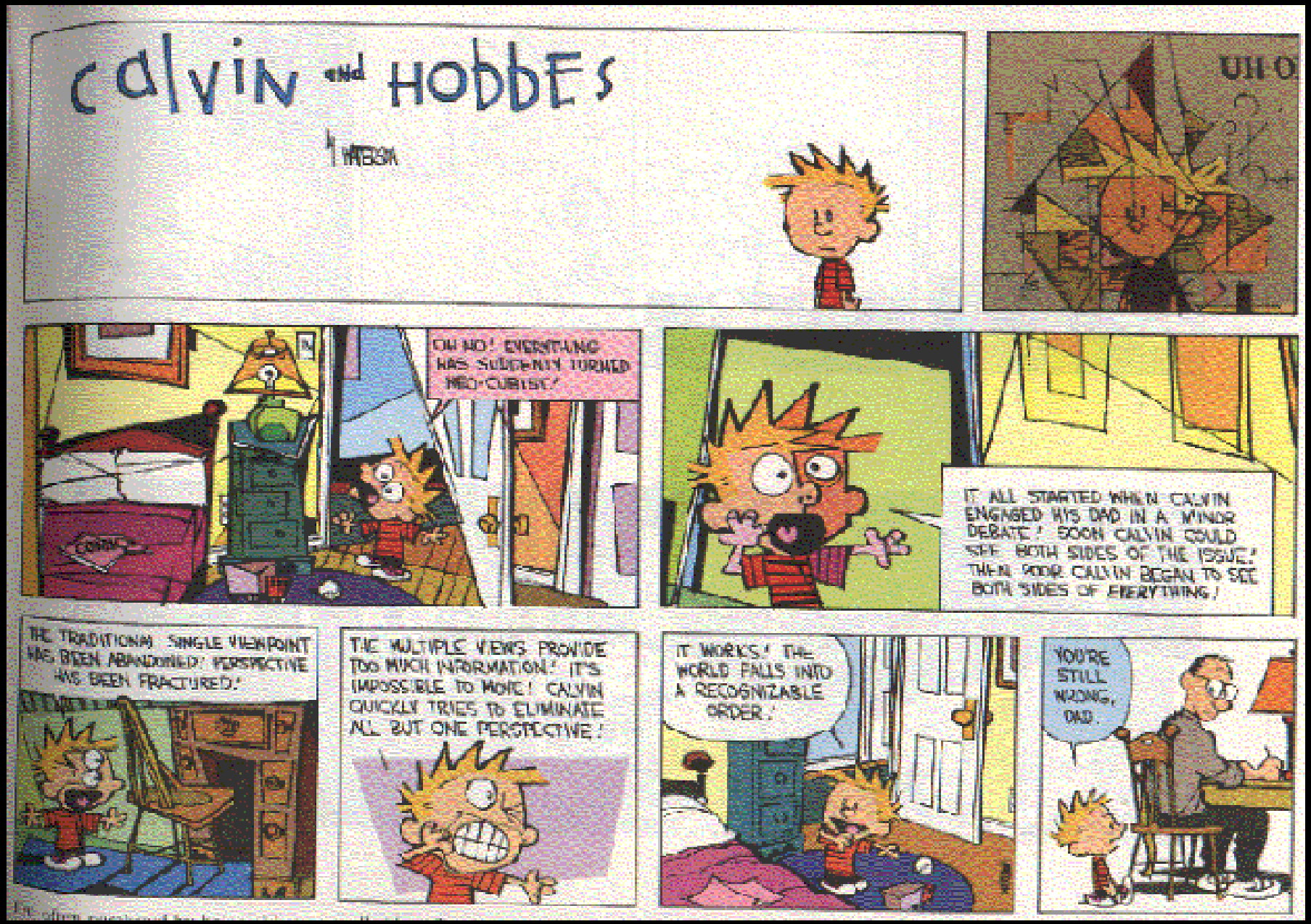
physiological arousal	clonidine benzodiazepines TCA antipsychotic medication
habituation response	clonidine benzodiazepines TCA? antipsychotic medication?

Future directions

- developmental stage dependent / independent risk and resilience factors determined

- more specific psychological and medication treatments determined

- more specific monitoring of these treatments determined


calvin and HOBBES
UH-O
OH NO! EVERYTHING HAS SUDDENLY TURNED NEO-CUBIST!
IT ALL STARTED WHEN CALVIN ENGAGED HIS DAD IN A MINOR DEBATE. SOON CALVIN COULD SEE BOTH SIDES OF THE ISSUE. THEN POOR CALVIN BEGAN TO SEE BOTH SIDES OF EVERYTHING!
THE TRADITIONAL SINGLE VIEWPOINT HAS BEEN ABANDONED. PERSPECTIVE HAS BEEN FRACTURED.
THE MULTIPLE VIEWS PROVIDE TOO MUCH INFORMATION. IT'S IMPOSSIBLE TO MOVE! CALVIN QUICKLY TRIES TO ELIMINATE ALL BUT ONE PERSPECTIVE.
IT WORKS! THE WORLD FALLS INTO A RECOGNIZABLE ORDER.
YOU'RE STILL WRONG, DAD.

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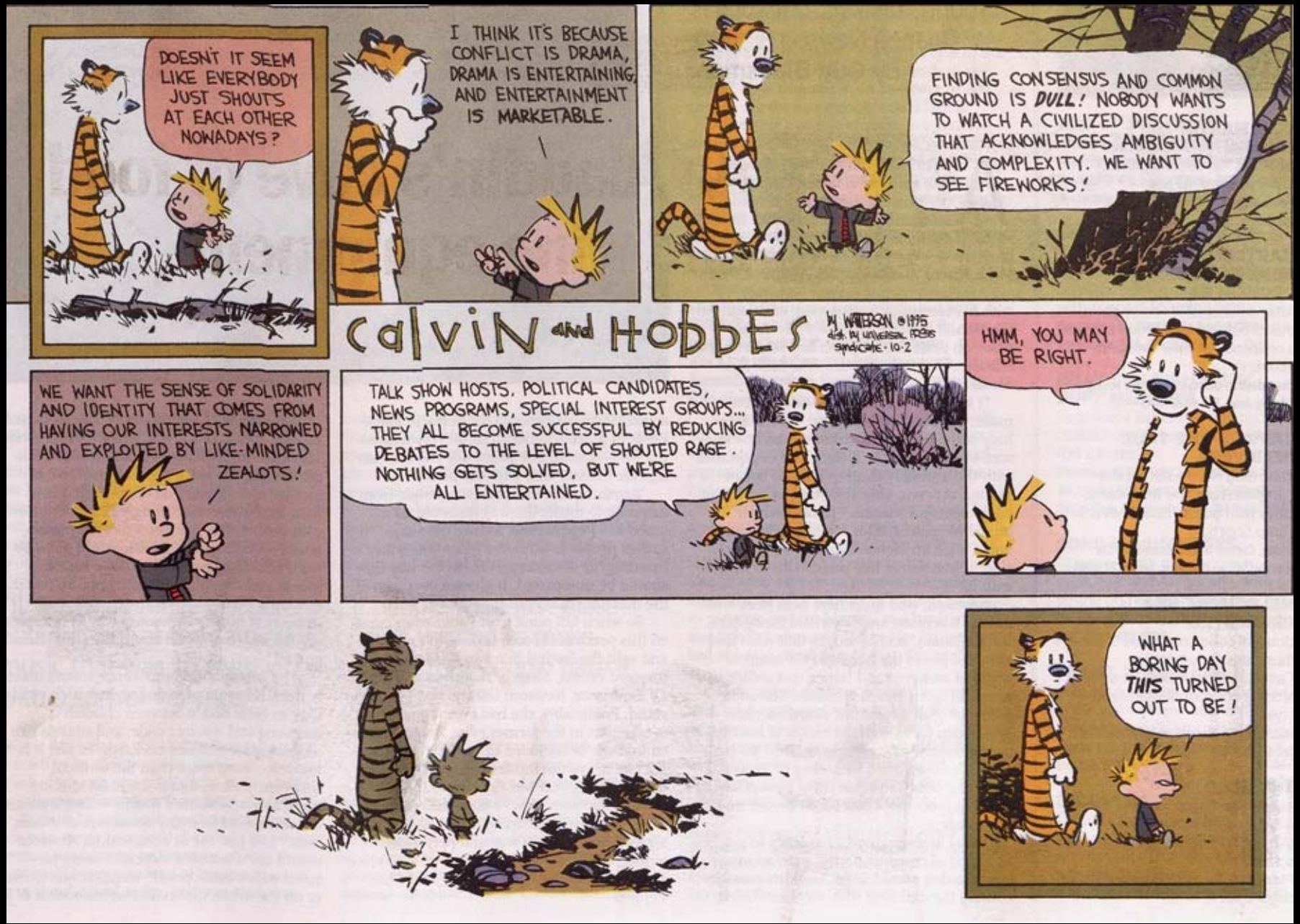
DOESN'T IT SEEM LIKE EVERYBODY JUST SHOUTS AT EACH OTHER NOWADAYS?
I THINK IT'S BECAUSE CONFLICT IS DRAMA, DRAMA IS ENTERTAINING, AND ENTERTAINMENT IS MARKETABLE.
FINDING CONSENSUS AND COMMON GROUND IS DULL! NOBODY WANTS TO WATCH A CIVILIZED DISCUSSION THAT ACKNOWLEDGES AMBIGUITY AND COMPLEXITY. WE WANT TO SEE FIREWORKS!
Calvin and Hobbes
by Watterson ©1995 dist. by Universal Press Syndicate 10-2
WE WANT THE SENSE OF SOLIDARITY AND IDENTITY THAT COMES FROM HAVING OUR INTERESTS NARROWED AND EXPLOITED BY LIKE-MINDED ZEALOTS!
TALK SHOW HOSTS, POLITICAL CANDIDATES, NEWS PROGRAMS, SPECIAL INTEREST GROUPS... THEY ALL BECOME SUCCESSFUL BY REDUCING DEBATES TO THE LEVEL OF SHOUTED RAGE. NOTHING GETS SOLVED, BUT WE'RE ALL ENTERTAINED.
HMM, YOU MAY BE RIGHT.
WHAT A BORING DAY THIS TURNED OUT TO BE!