



## To be or not to be - the Autistic Enigma

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"Since 1938, there have come to our attention a number of children whose condition differs so markedly and uniquely from anything reported so far, that each case merits a detailed consideration of its fascinating peculiarities." Leo Kanner, Autistic disturbances of affective contact 1943

### Developmental Disorders

- Onset during infancy or early childhood
- Impairment or delay in the development of functions that are strongly related to biological maturation of the central nervous system
- Steady course, without remissions and relapse

### Pervasive Developmental Disorders

- Qualitative abnormalities in reciprocal social interactions
- Qualitative abnormalities in language and communication
- Restricted, stereotyped and repetitive patterns of behaviour and interests

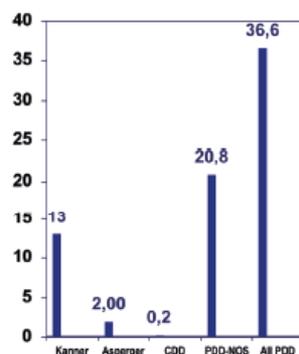
### Joint attention

It is at around 1 year of age that infants for the first time begin to look where adults are looking flexibly and reliably, use adults as social reference points, and act on objects in the way adults are acting on them. At around this same age, infants also begin actively to direct adult attention to outside entities using intentionally communicative gestures; this achievement is soon followed by the acquisition of skills of linguistic communication. What all these skills have in common is that they involve the referential triangle of child, adult, and some third event or entity to which the participants share attention.

Mundy et al. 1998, 2003, Paparella 2004

### Classification of ASD

- F 84.0 Childhood Autism
- F 84.5 Asperger Syndrome
- F 84.1 Atypical Autism
- F 84.9 Pervasive Developmental disorder not otherwise specified (PDDNOS)

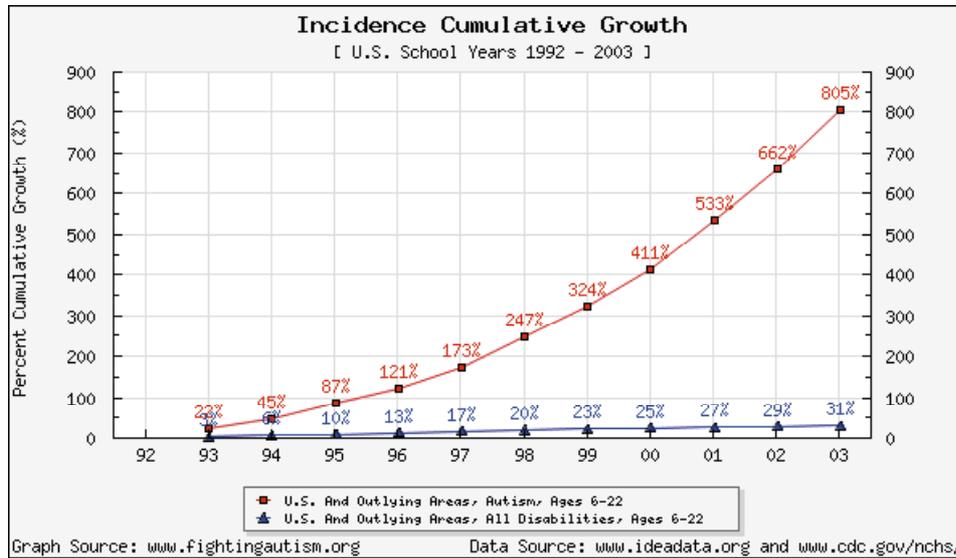


### Epidemiology

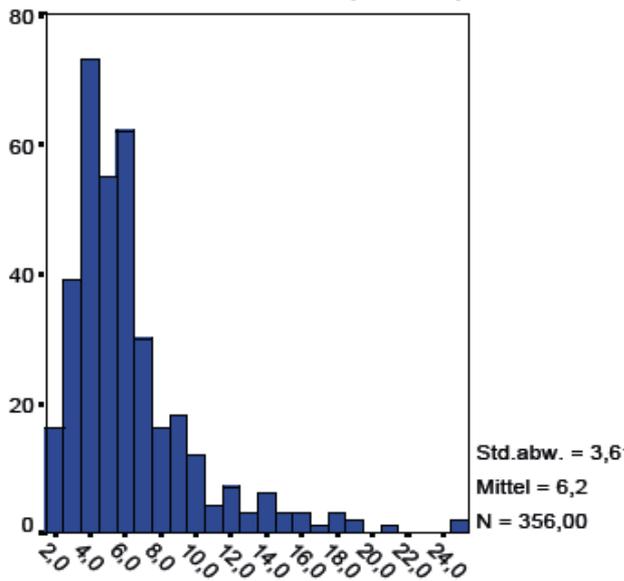
- Meta-analysis 34 studies PDD prevalence
- Median age: 8 years Fombonne 2005, J Clin Psychiatry



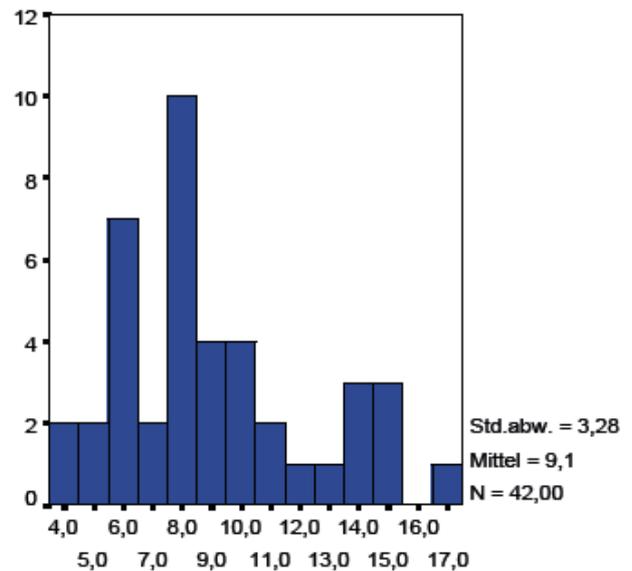
Not a rare disease



### Age at diagnosis Kanner-Asperger



Alter bei Diagnose Autismus



Alter bei Diagnose Asperger Syndrom

### Early recognition ASD

- 1999 (UK) Autism 5.5 years Asperger 11 years
- 2002 (USA) Autism 6.3 years
- 2005 (UK) Asperger > 3. years
- 2006 (CH) Autism 6 - 4.5 - 6 years
- Noterdaeme (G) Autism 6.1 years Asperger 9.3. years



## Childhood autism - social interaction

1. failure to use eye to eye gaze, facial expression, body posture and gesture to regulate social interaction
2. failure to develop peer relationships that involve a mutual sharing of interests, activities and emotions
3. Lack of socio-emotional reciprocity, as shown by deviant response to other's people emotions; a lack of modulation of behaviour according to social context and a weak integration of social, emotional and communicative behaviours
4. Lack of spontaneously seeking to share enjoyment interests or achievements with other people (a lack of showing, bringing or pointing)

## Childhood autism - communication

1. A delay in, a total lack of development of spoken language that is not accompanied by an attempt to compensate through the use of gesture or mime as an alternative mode of communication
2. Relative failure to initiate or sustain conversational interchange (at whatever level of language skills are present), in which there is reciprocal responsiveness to the communication of the other person 3. Stereotyped and repetitive use of language or idiosyncratic use of words and phrases
3. Lack of varied spontaneous make believe or social imitative play

## Leo Kanner

"Words to him had a specifically literal, inflexible meaning" Hans Asperger

"One can invariably pick up these kinds of abnormalities in the language of autistic individuals.

Sometimes the voice is soft and far away, sometimes the voice drones on in a sing-song. Sometimes speech is over-modulated and sounds like exaggerated verse-speaking." "One other thing: autistic language is not directed to the addressee but is often spoken as if into empty space."

## Leo Kanner

"As far as the communicative functions of speech are concerned, there is no difference between the eight speaking and the three mute children."

"Thus, from the start, language – which the children did not use for the purpose of communication – was deflected in a considerable measure to a self-sufficient, semantically and conversationally valueless or grossly distorted memory exercise."

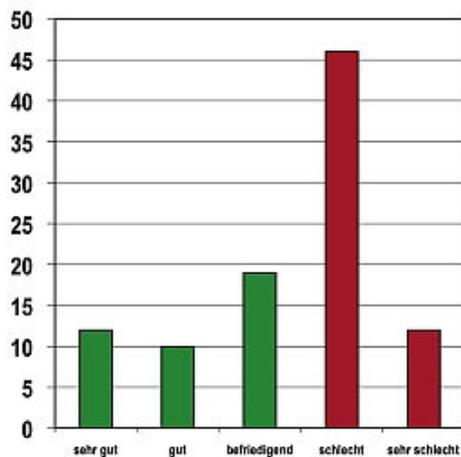
## Hans Asperger

"Listening to the boy talking, one was surprised how clever he sounded. He kept his immobile dignity while speaking and talked slowly, almost as if in verse, seemingly full of insight and superiority. He often used unusual words, sometimes poetical and sometimes unusual combinations."

## Childhood autism - RRB

1. An encompassing preoccupation with one or more stereotyped and restricted patterns of interest that are abnormal in content or focus; or one or more interests that are abnormal in their intensity and
2. Circumscribed nature, though not in their content or focus
3. Apparently compulsive adherence to specific, non-functional routines or rituals
4. Stereotyped and repetitive motor mannerisms that involve either hand or finger flapping or twisting, or complex whole-body movements
5. Preoccupations with part-objects or non-functional elements of play materials (such as odor, the feel of their surfaces, or the noise or vibration that they generate).

## Course



Age at diagnosis: 7 years

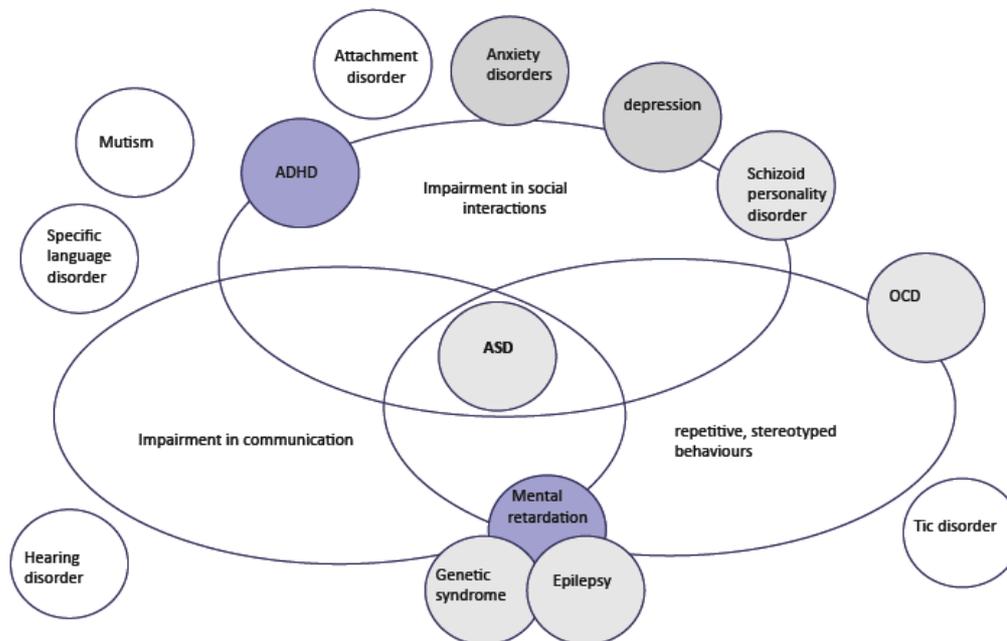
Age at FU: 29 years

IQ > 50

#### IMPAIRMENT

- SELF SUPPORT
- OCCUPATION
- FRIENDSHIP
- PARTNER

Howlin, Goode, Hutton, Rutter 2004 J Child Psychology and Psychiatry





## Psychopathology CBCL



## ADHS

- Attention Deficit
  - Hyperactivity Disorder (DSM IV)
  - Inattention subtype
  - Hyperactivity-Impulsivity subtype
  - Combined subtype
- 3-months prevalence of all subtypes: 28% (Simonoff et al., 2008)
  - 10 - 14 years of age, population-based; N=255
- spot prevalence all subtypes: 30% (Leyfer et al., 2006)
  - 5 - 17 years of age; clinical sample; N=109
  - Inattention Subtype: 20%

## ADHS

- Methylphenidat – evidence level II (RUPP 2005; Posey et al., 2007; Jahromi et al., 2009)
  - N=72, age 5-14 ; ASD + Hyperactivity; 'medium' dosage = 0,25 mg/kg KG best, 3x daily
- Marked improvement of hyperactivity
- But: little effect with ADHS
- 49% Responder; 18% discontinuation rate due to side effects
- NW: decreased appetite, sleep problems, increased irritability – N=66 (subgroup)
- more effect on hyperactivity/impulsivity than on inattention;
- Dosage here up to 0,5 mg/kg KG
  - N=33 (subgroup)
- improvement of common attention, self-regulation and affective regulation

## Anxiety disorders and obsessive-compulsive disorders

- Frequent comorbidity with ASD (Leyfer et al., 2006; Simonoff et al., 2008)
  - Obsessive-compulsive disorders: ca. 35%
- DD: Obsessive-compulsive disorders – stereotypical behaviour
  - Anxiety disorders: esp. specific phobias; together ca. 45%
- Medication
  - CY-BOCS: Risperidon – Evidence level I (Cochrane review Jesner et al., 2007)



- SSRI: Citalopram, Fluoxetin untersucht
  - No (!) effect on stereotypical and obsessive-comp. behaviour
  - Increase (!) of 'irritability' (King et al. 2009; Hollander et al., 2005)
  - With HFA/Asperger-Syndrome
    - Cognitive behaviour therapy in case of anxiety disorders (evidence level II)
- (Sofronoff et al., 2005; Wood et al., 2009)

#### Symptoms of obsessive compulsive disorders

- Compulsive washing, controlling, repeating, arranging, often in complex rituals
- Obsessive thoughts, specific anxieties (illness or death, urine, feces and other disgusting substances, filth, chemicals, bacteria)
- obsessive asking, swearing and ranting.

#### Depressive episodes

- Comorbidity with HFA/Asperger-Syndrome during adolescence and adulthood (Leyfer et al., 2006; Simonoff et al., 2008; Sierlin et al., 2008)
- Medication
  - Evidence level III
- Mirtazapin (Posey et al., 2001)
- Improvement of depressive Symptoms, sleep disorders and irritability
- No randomized controlled study yet
  - SSRI not researched rel. to dep., but no improvement of CGI-I (King et al., 2009; Hollander et al., 2005)
- Psychotherapy
  - No studies to cognitive individual behaviour or group therapy

#### Summary

- anxiety disorders: frequently comorbidity
- SSRI: not evaluated, but effectiveness very unlikely
  - In ASD and IQ > 80; cognitive behaviour therapy in group setting
- Obsessive compulsive symptoms;
  - Risperidon (Evidence level I)
  - Not (!): SSRI (Evidence level II)
- Depressive episode/depressive symptoms
  - Insufficient number of studies
  - – Mirtazapin: evidence level III
  - SSRI: effectiveness highly unlikely
  - Psychotherapy: not evaluated

#### Empirically well founded and accepted effective methods

Behaviour therapy and therapeutic programmes, also in early intervention programmes

(Lovaas, 1987, Koegel et al., 2001)

Psychoeducation programmes like TEACCH (Mesibov, 1997)

Medication for associated symptoms (McCracken, 2005, Poustka & Poustka, 2007)

#### Empirically moderately founded but potentially effective methods

Training of social skills, also with Theory of Mind Trainings, Social Stories

or group-therapeutic choices (Gray, 2000, Baron-Cohen, 2004, Herbrecht & Poustka, 2007)



Empirically not founded but potentially effective methods

Occupational therapy, physical therapy, riding therapy, especially if elements of learning theory are integrated into the treatment sessions

Questionable methods without empirical foundation and without scientifically founded background

Holding therapy, diets, vitamins, minerals, secretin, auditive integration training, Irlen-Therapy, Facilitated Communication (FC), Affolter, Delacato

What makes studying hard?

- Recognize: What is important now?
- Adjust to new demands
- Increased distractibility
  
- Organisation of activities/following steps/chronological linkage
- Difficulty in spatial organisation
- Ambiguity / unambiguity in language
- Taking decisions which require some assessment

Change of perspective - positive

Autistic children :

- Appreciate regularity
- Are very accurate
- Have an eye for detail
- Take remarks literally
- Love repetitions
- No need for close attention
- Able to focus on a matter intensely
- Remember things for a long time
- Usually know what they really enjoy

Change of perspective - negative

Autistic children don't like statements as these:

- The teacher is ill
- Something special is going to happen today
- Find yourselves a partner
- Today we will do something totally new
- We'll go on a field trip
- We'll have a party
- We/you are invited
- I have a surprise for you
- You can choose
- You can draw what you want
- We'll finish shortly

TEACCH

Treatment and Education of Autistic and related Communication Handicapped Children

1. Adjust environment
2. Increase individual skills

Schopler 1997, Mesiboc 1997, Panerai et al. 1997, Ozonoff et al. 1998 Mesibov et al. 1997



## TEACCH-Programme

- Originated from a research project at the University of North-Carolina (1964)
- Eric Schopler and Robert Reichler launched TEACCH (1972)
- Ongoing scientific monitoring and development of the programme

## Central terminology in TEACCH

- Structuring
- Structuring of space
- Structuring of time
- Structuring of work/tasks
- Structuring of material
- Setting up routines as structural help
- Visualization

## Benefits of TEACCH

- No dogma/ integrated approach
- The familiar is systematized
- No rigid training
- Individually usable and adaptable
- Suitable for everyday use
- Other children benefit as well
- Enables integration

## Levels of structuring

- Structuring of space
- Structuring of time
- Structuring of work/tasks
- Structuring of material
- Setting up of routines

## Structuring of space

- Clearly arranged rooms
- Marked areas
- Clear terminology
- Fixed assignment of activities

(materials: adhesive tape, carpet tiles, photos, labels, sticky notes, color coded cards, ...)

## Structuring of time

- Visual presentation of sequence of events (symbols, words, drawings)
- 'clear structures' needs to be determined individually (daily to yearly schedules)
- Managing schedules through checking and monitoring (ticking off, stapling, tearing off)
- Visible on a wall, at the hand, at a location)

## Structuring of work/tasks

- Goal: high autonomy in handling activities, e.g. managing a workload / a task
- Establishing 'work systems', e.g. work boxes / done boxes  
Cards with symbols or jobs, card boxes, task lists, What needs to be done?  
How much needs to be done? When will I be done? What's next?



# 7<sup>TH</sup> HOPE CONGRESS MUNICH 2010

NOVEMBER 3 - 7, 2010

## DSM-V Task force

- Autistic Spectrum disorder - no distinction any more between autism and Asperger
  - Syndrome, atypical autism, PDD-NOS
- Social communication & stereotypical interests & behaviour - no longer three areas of behaviour
- Separate assessment of severity for both areas
- possibly language, regression, comorbidity as additional codes

## What does really work?

- Structured therapies
  - Clearly defined near-term goals, parental agreement
  - Social communication
  - Autonomy
  - Keep in mind motivation and Initiative
  - Generalization
- Adjust to progress of development
- Treat associated symptoms