Different types of "dangerousness" – autistic traits vs psychopathic traits

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Psychopathic traits
Hare, 1991, 2003,
Psychopathy Checklist Revised

- **Factor 1**
  - **Interpersonal interaction**
    - Glib
    - Charming
    - Manipulative
    - Grandiose
  - **Emotions**
    - Shallow
    - No regret, no anxiety

- **Factor 2**
  - **Life style**
    - Irresponsible
    - Unrealistic planning
    - Impulsive
    - Poor behavioral controls

- **Antisocial behaviour**
  - Early disruptive behaviour
  - Juvenile delinquency
  - Diverseified criminality
Autistic traits

- Limited cognition – own perspective
  - Difficulties in cognitive perspective taking, mentalising, theory of mind
  - Routines and rituals
  - Lack of coherence
  - Fixation on details
  - Fantasies but limited – the same over and over again

- Impaired social interaction and communication
  - Lack of reciprocity
  - Difficulties in verbal and non-verbal communication
Case A

Visit to the acute psychiatric emergency unit

- Male 44 years, computer engineer, single, no children
- Has always been socially isolated, one male acquaintance, no sexual relations, previous contacts with prostitutes – stopped that following new legislation
- Reads a lot, interested in different religions
- Thinks about death more and more, has started to think about different ways of dying – reads more about violence – ”strange thoughts”
- Previous year: increasingly strong beliefs that society does not treat him fair– irritated with almost everyhting
- No substance abuse, consumes alcohol only very rarely
- Has been on sick leave for a month – stomach trouble – can not manage to concentrate – odd thoughts about violence – ”I have to show someone how angry I am” – Talks about other people as ”objects” – empathy disorder?
Case B

requests admission (sober) and describes thoughts about killing his wife

- Criminal history
  - antisocial personality disorder, violent crimes, no criminal acts the last eight years
  - Early deviant behaviours – Conduct disorder
- Previous substance abuse
  - No substance abuse the last six years – valid driver’s licence
- Rather self-focused with narcissistic traits, good verbalising ability, reduced empathy for other people, cares most about himself
- Works part time, sickness benefit part time
- Relationship problems
  - Sometimes violence, frustrated when his wife wants to meet friends and work

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Virtual Scenarios for clinical use

- The patient, decides on actions to be taken, and will face the consequences of these actions.
Virtual Scenarios for clinical use

• RoD/Domestic violence
Risk for violence among psychiatric patients

Mixed data
The link between violence and mental disorder
Elbogen & Johnson. Arch Gen Psychiatry 2009;66(2):152-161

- Respondents aged 18 years and older
- Exclusion: Individuals in hospitals, jails or prisons. Individuals not often included in general population surveys, e.g. with unstable housing, were included
- $N = 43,093$ available for interview
  - $N = 39,959$ participated in wave one interview
  - $N = 34,653$ participated in wave two interview
- Follow up interview (wave two) after three years on average

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Results
Elbogen & Johnson 2009

• Robust predictors of any violence
  – Younger age, male
  – History of violence
  – Juvenile detention
  – Being divorced or separated during the past year
  – History of physical abuse by parent
  – Parental criminal history
  – Unemployed in the past year
  – Comorbid mental health and substance disorder
  – Victimisation in the past year

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Prediction all types of violence as a function of history of violence, mental health disorder and substance abuse/dependency alcohol/drugs

- Risk increasing with order as stated below
- History of violence
- Mental health disorder + History of violence
- Substance abuse + History of violence
- Mental health disorder + Substance abuse + History of violence
RISK ASSESSMENT Development

- **First generation**
  - Clinical psychiatric assessment

- **Second generation**
  - Actuarial – static historical items

- **Third generation**
  - Structured clinical assessment
    - Static + dynamic factors
  - Check lists + Clinicians
  - Team
Check-lists
"Instruments"

- Fazel et al. BMJ 2012;345:e4692

- Systematic review – metaanalysis
  - 73 studies, 24,897 participants,
  - 23.7% reoffending after on an average of 49.6 months

- Results
  - Positiv predictive validity: 41% (27-60)
  - Negative predictive validity: 91% (81-95)
  - ROC: 0.66-0.74
Risk assessment

ROC analysis: appr 0.70
New methods?
Do we need new mental models?
Compare diagnoses

- Developing constructs for psychopathology research
  - Behavioral neuroscience
- NIMH
- Research domain
  - Affect
  - Cognition
  - Social processes
  - Regulating mechanisms
Risk assessment violence

Group level

vs

Individual level
Individual level

• Very specific situation
  – What? When? Where? To whom?

• Drives, motives in a specific context
  – Why?
Type of aggression

- Aggression and Violence
- Different types of aggression
  - Affective
    - reactive, impulsive
    - high autonomic arousal
    - The violence as a direct response to stimuli
  - Predatory
    - planned, controlled, instrumental
    - low autonomic arousal

- Meloy 1988, Blair J, 2005

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A challenge!
Social and cognitive neuroscience
To learn more about mechanisms behind human decision making
Why do we act?

A short reflection
The process of decision making and behaviour

- **Reward**
  - Striatum

- **Social cognition**
  - understand intentions of others – mentalising, cognitive perspective taking – theory of mind
    - mPFC, TPJ

- **Emotion**
  - to share emotions with others
    - insula, ant cing cortex

- **Ability to control and adapt to the context**
  - dlPFC
Review

The role of social cognition in decision making

Chris Frith and Tania Singer
Phil. Trans. R. Soc. B 2008, 363: 3875-3886
Drives to act

- Reward system
- Primary and secondary rewarders
- Placebo – thoughts and imagination and expectations
- Modified by values, attitudes, sociocultural context (norms and moral values – fairness and trust)
- Ability to control and postpone immediate wishes
Processing of information

Marsel Mesulam M.
From sensation to cognition
Brain 1998;121:1013-1052
In the clinical context –

Hypothesis

Different motives related to different traits?
Perhaps we have to learn more about mechanisms behind traits in order to understand normal behaviour and risk behaviour and thus increase validity of individual risk assessments.
Offender characteristics in lethal violence - with special reference to antisocial and autistic personality traits

Motivation to act
Important needs are not satisfied

- Basic needs and "learned basic needs"
  - Impulsive
  - Controlled
- Perception – the need to monitor the environment
- Cognition – the need to make risk assessment of people, e.g. mentalising
- Communication – the need to interact with people - verbalisation
  - Short term
  - Long term
Psycopathic traits – mostly rewarded by external signals/motives/basic needs results in one life style behaviour

Autistic traits –
Mostly rewarded by internal signals/motives (cognition and communication)
Results in a different life style behaviour compared to the behaviour related to psychopathic traits
Motives
Psychopathic as compared to odd/autistic traits

• Need – *Psychopathic and/or antisocial*
  – Concrete – money, sex, drugs - *Impulsive*
  – Abstract – Dominance, power, sadism - *Controlled*

• Cognition – limited and repetetive thoughts/fantasies – rituals – *odd/autistic traits*

• Communication – *odd/autistic traits*
  – Impulsive
  – Compulsory
    • Justice, balance, revenge
Virtual Scenarios for clinical use

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Conclusion from these reflections

• Try to find out drives, goals and motives för behaviour
• Mechanisms driving behaviour
  – patterns in behaviour?
• Specific traits?
• How does this relate to the forensic psychiatric assessment, risk prediction, treatment and ris prevention