

# Why do drunk drivers continue to drink and drive?

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(INRETS)

# Age

- Young people keep on drinking and driving because of :
- -biological reasons (agenda between socio-emotional reward system and limbic areas, and socio-cognitive control system and prefrontal areas)
- -psychological reasons : despite negative utilities and costs of DUI, positive utilities and benefits of risky behaviors (social image, autonomy, peer pressures, anxiety and stress coping, etc)

# Sex

- Men keep on drinking and driving because of :
- -mainly psychological reasons :
- .lifestyles
- .risk perception bias (comparative optimism)
- .sociocultural differences (differences Australia/North America/North of Europe and South of Europe)
- *gender gap* reduction in Australia (Abbott-Chapman *et al.*, 2008) on 1000 Tasmanian students and their parents

# Genes !

- Family genetic intergenerational transmission :
- -resistance to the effects of alcohol (interaction genotype/environment) of sons of alcoholics fathers
- -social modelling of behavior (Ferguson study in US, Wilson in BC)

# Family environment influences

- (Assailly, 2007) proposed a developmental psychopathology model of developmental cascade :
  - the heritage
  - the link
  - the structure
  - the behavior
  - the control

# Affective link developmental cascade

- Anxious attachment (avoidant)
- State of mind (detached)
- Emotion regulation
- Alexithymia
- Self regulation (self escape)
- Sensation seeking
- Risk taking, addiction, transgression of rules

# Personality and the selection of offence type

- (Fernandes *et al.*, 2007) on 116 young drivers :
- Different personality traits predict different types of offences (when age and sex are controlled) :
  - DUI is predicted by sensation seeking, perceived accident risk, general comparative optimism, attitudes related to alcohol
  - speeding is predicted by rebellion against authority, attitudes related to speed

# Personality

- Pittsburg longitudinal study on hyperactivity/attentional deficit (Thompson *et al.*, 2007) on 355 adults :
- Hyperactivity measured in childhood predicts DUI in adulthood (cf. works of Brown and Ouimet on drunk drivers and brain deficits)
- Political and ethical debates in France about hyperactivity predictivity status

# Who keeps on drinking and driving after 25 ?

- NZ longitudinal Study started in the 80's with Langley's works (Begg *et al.*, 2004) adressed this question :
- Those who keep on drinking and driving after 25 belong to 2 groups :
- 1) Young people who become alcohol dependent and so cannot refrain from DUI (on this traffic safety research turns into medical research)

# Who keeps on drinking and driving after 25 ?

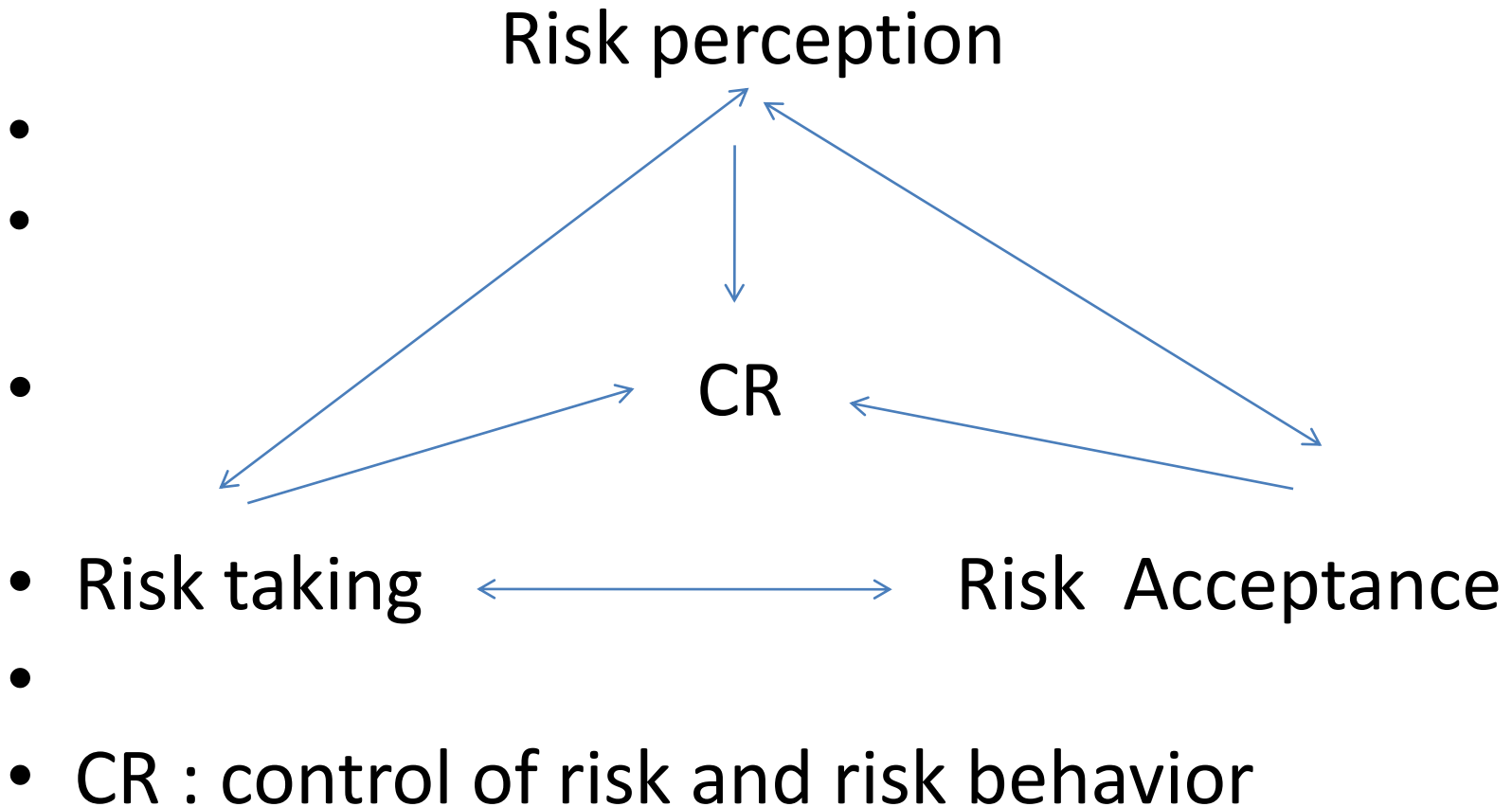
- 2) young people who keep on committing other types of offences ; 2 characteristics measured at 18 are predictive :

-aggressivity ;

-cannabis dependence

Prediction is different for men and women : teenage behavioral troubles predict accident involvement at 21 for women and at 26 for men

# Psychological mechanisms



# Risk perception

- 3 types of « knowledge gaps » :
- -knowledge of legal B.A.C.
- -estimation of subjective/objective B.A.C. in a driving situation (Beirness road survey and Assailly disco survey) : only 1/3 of precise estimators, the proportion of underestimators increase between arrival and departure from the disco ; for overestimators, breathalyzers may be a risk factor !
- -estimation of impairment threshold : distinction between law and danger (especially in countries with 0.8 as legal limit !)

# Risk perception

- « Alcohol myopia » (Steele) : once the subject drinks, risk perception changes ...
- Denial (of the violation, of the link violation/accident)
- False consensus (preventive applications in US campus)

# Risk acceptance

- Riding with a drunk driver (Calafat *et al.*, 2009, on 1 300 drivers of 9 E.U. countries)
- DUI and RDUI are correlated : a driver keeping on drinking and driving is also more susceptible to be a passenger of a drunk driver (lifestyle)
- DUI predicts RDUI but RDUI does not predict DUI (women !)

# Psychological mechanisms

- -the prototype image/behavioral willingness model (Gibbons, Gerrard) : explains the non intentional, non planified character of DUI, especially among young drivers
- -effects of media exposure to drinking behaviors

# Life is the cure of DUI !

- Neither education nor enforcement but life !  
Recent US study (Bingham *et al.*, 2009): various indicators of social maturity (job, wedding, etc.) related to decrease of young drivers violations
- Even the desire to get married is predictive (Willoughby *et al.*, 2009) !
- This corresponds to social control theory of Hirschi (1969)

# Rehabilitation measures effect

- -interlocks
- -effects of driver improvement programs : see WP5 of DRUID study : transtheoretical model of change and diamond of change