THE ROLE OF SOCIAL FACTORS IN YOUNG PEOPLE'S DRUG USE, AND OPPORTUNITIES FOR PREVENTION

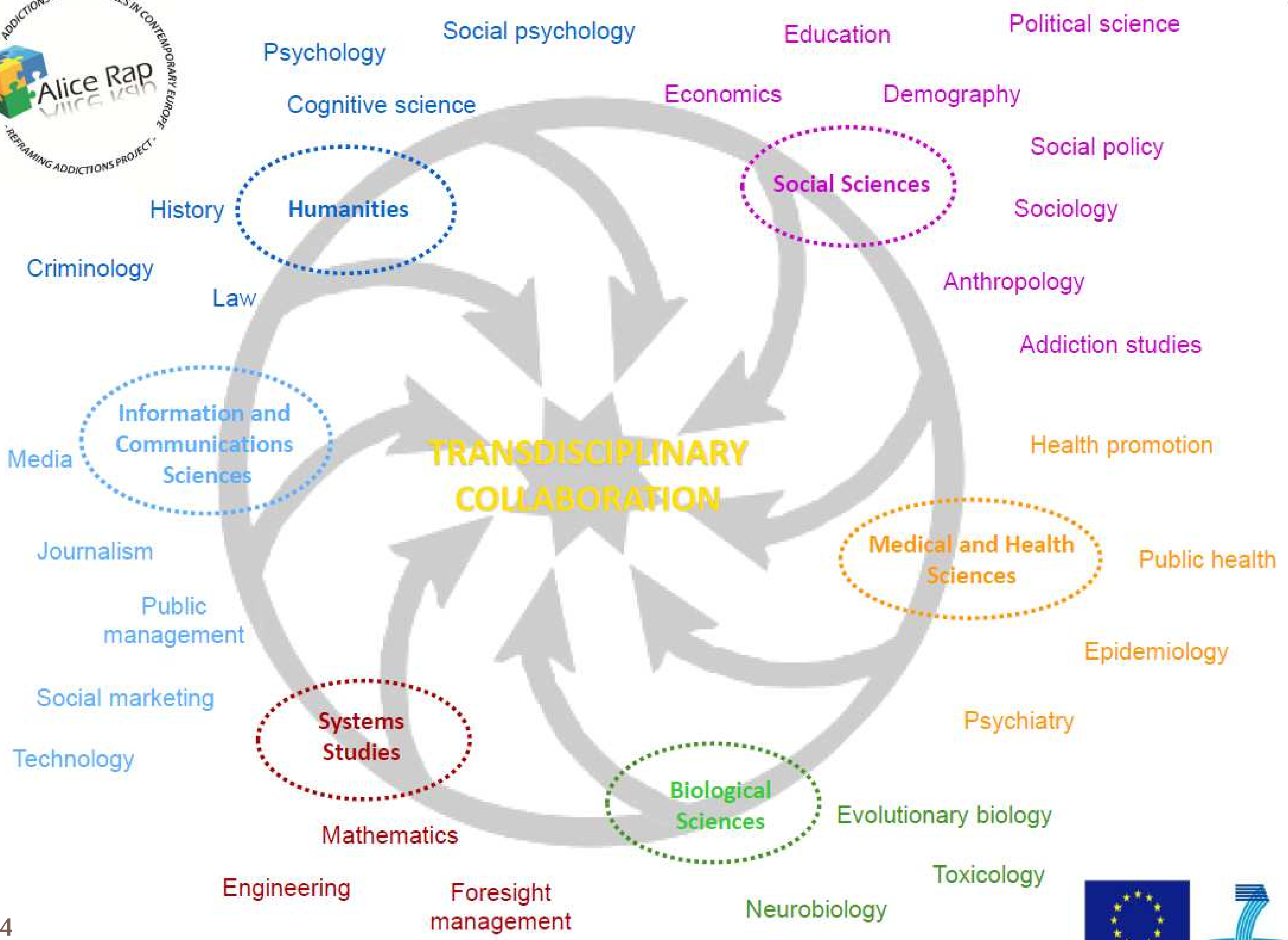
23rd October, 2014

About me

- Professor of Substance Use, Centre for Public Health, Liverpool John Moores University
- Background in (psycho)pharmacology, funded research in prevention science, evidence based practice, and RCTs
- Board Member, European Society for Prevention Research (www.euspr.org)
- Member, Advisory Council on the Misuse of Drugs (ACMD)

About this talk

- What are some of the social, societal, and cultural factors that influence (non-dependent) drug use?
- Does a greater understanding of social factors allow for a refinement of prevention activities?
- Focus on illegal drug use, but where evidence limited, draws upon alcohol and tobacco field
- All references available upon request


Psychology
Social psychology
Cognitive science
Education
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Economics
Demography
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Social Sciences
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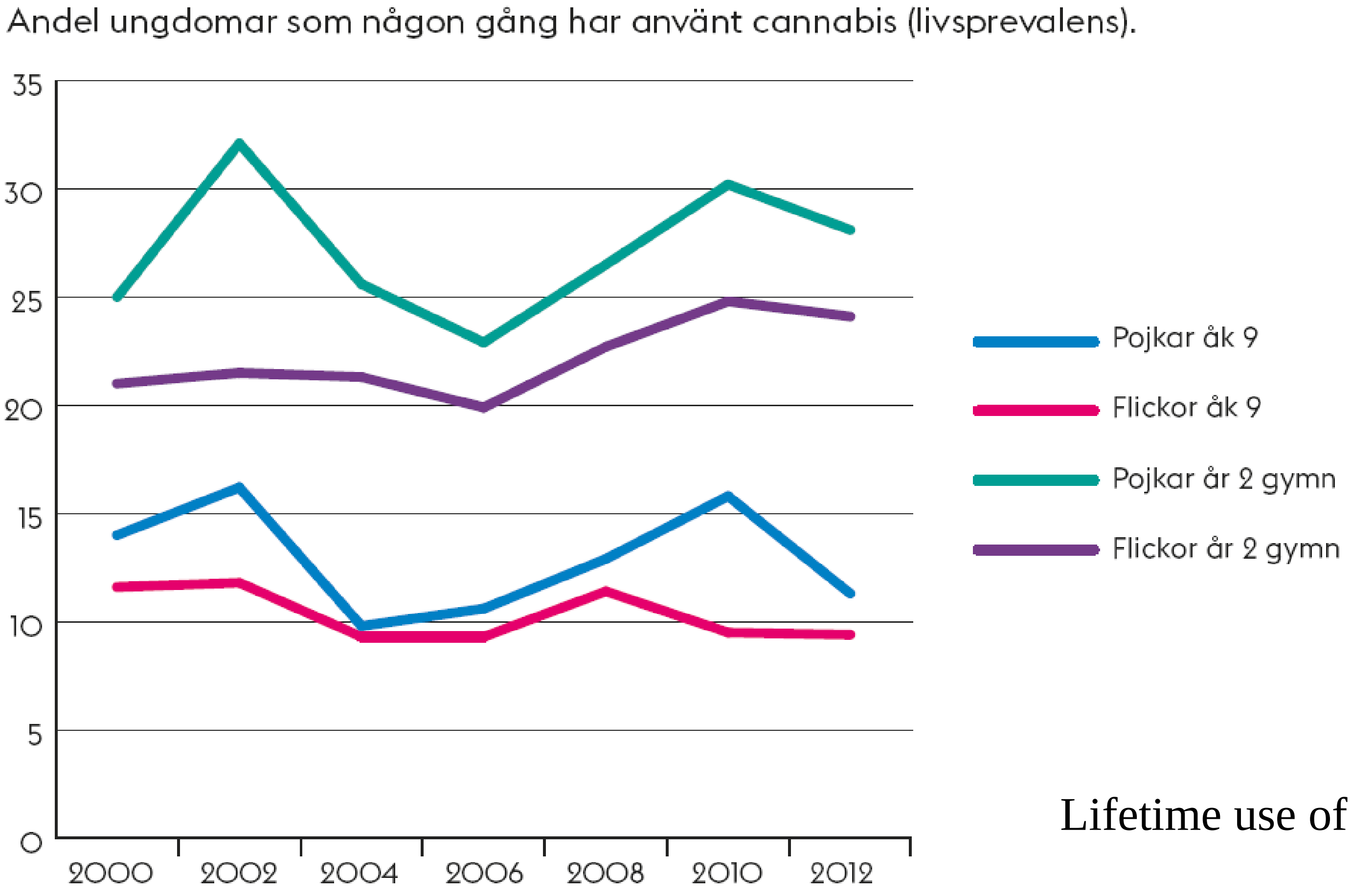
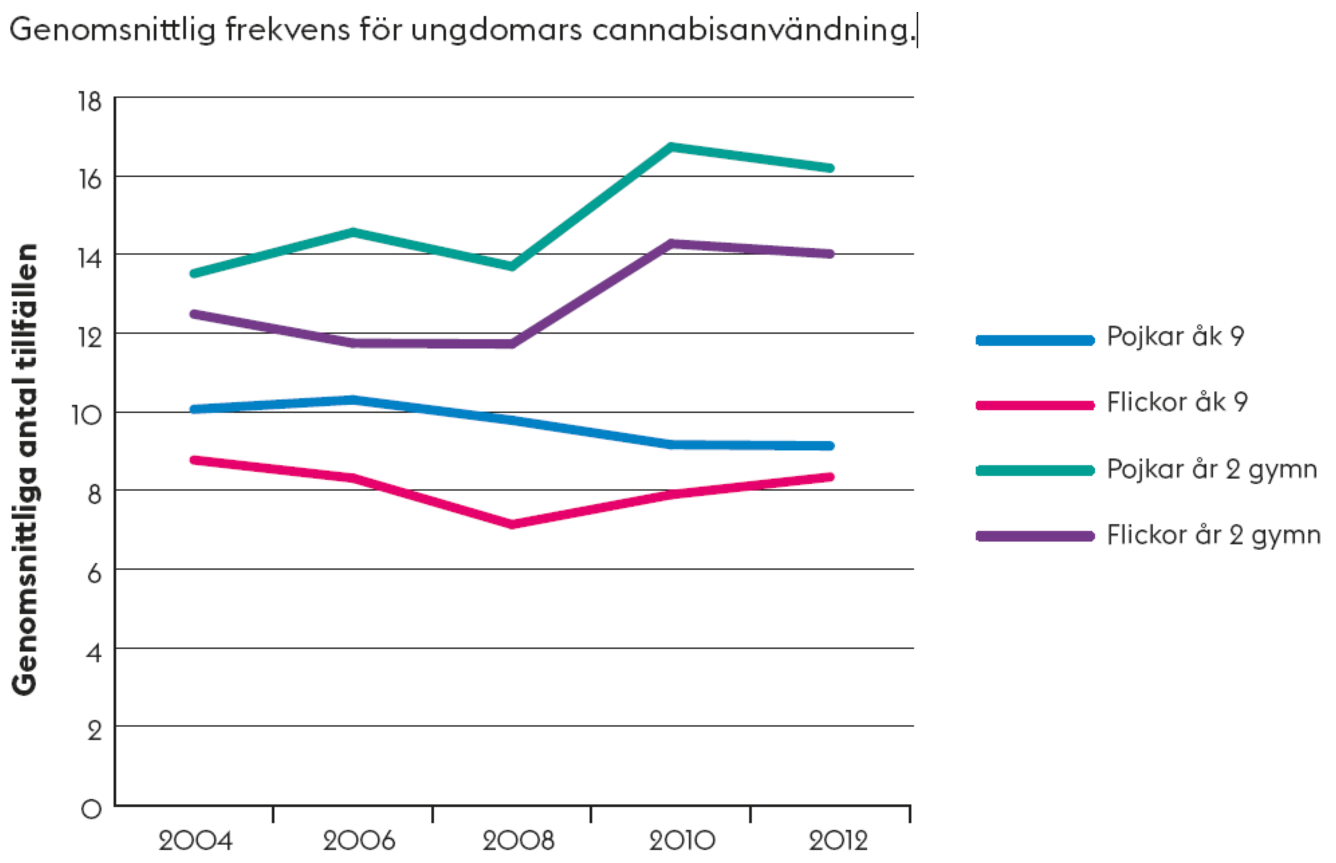
Drug use in Sweden



Lifetime use of cannabis

Hallgren, 2014

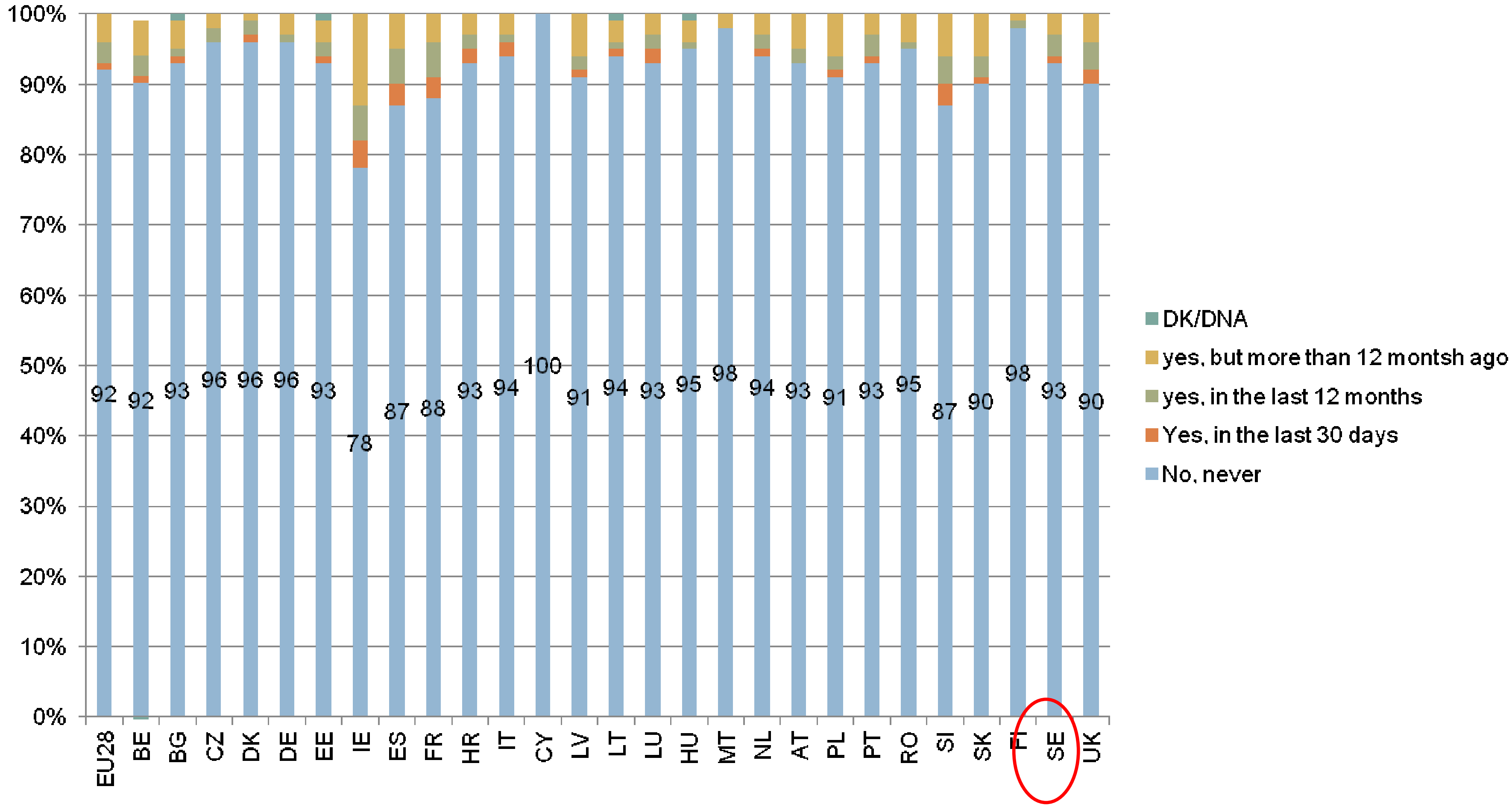
Drug use in Sweden



Frequency of cannabis use

Hallgren, 2014

Use of Novel Psychoactive Substances in 15-24 year olds

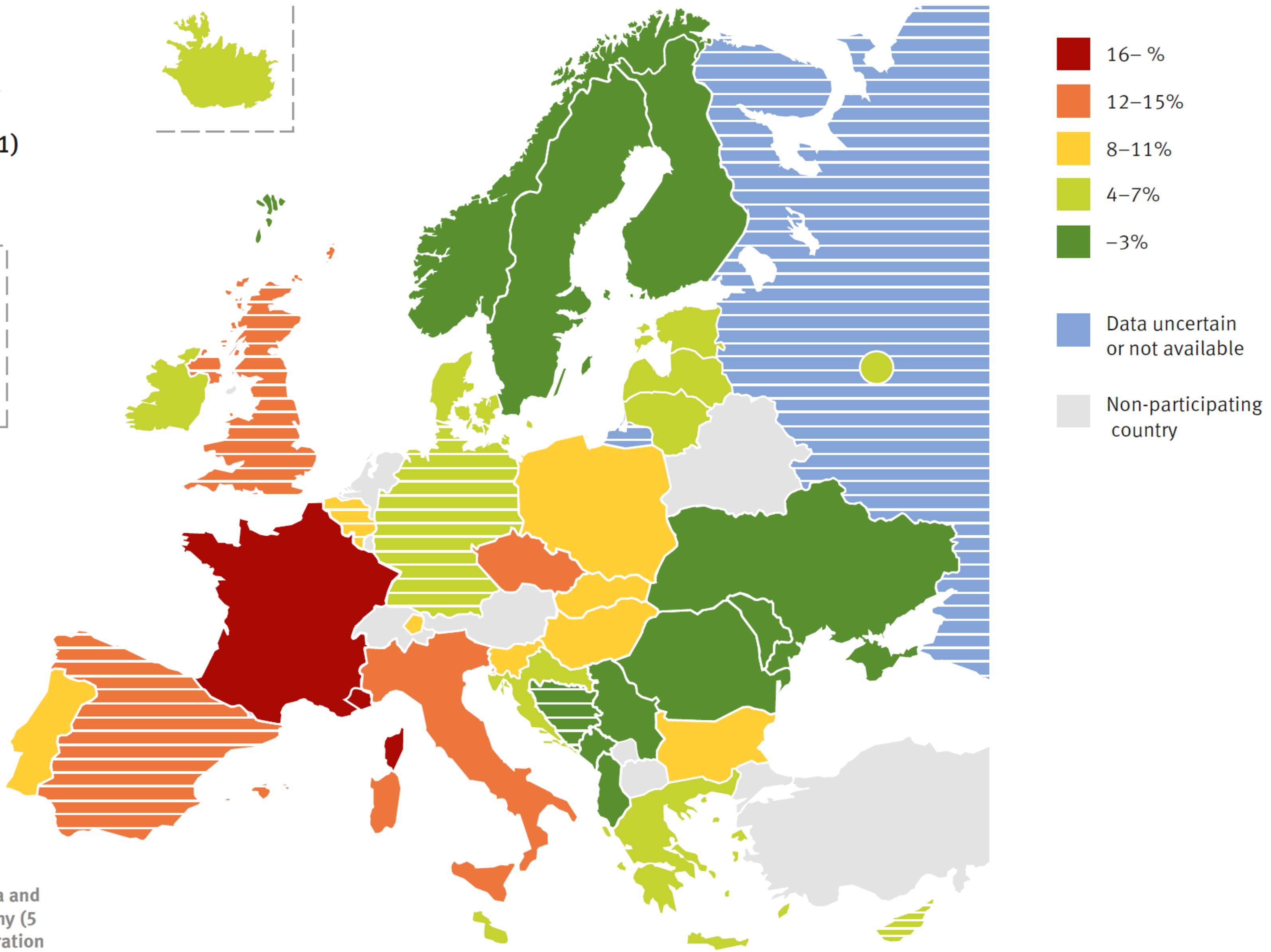


Eurobarometer Flash Survey 2014 (DG-Justice 2014)

Substance Use epidemiology in young people in the EU

- The best data we have on comes from the European School Survey Project on Alcohol and Other Drugs (ESPAD). It is based on data from more than 100,000 European students in 36 countries.
- www.espad.org
- ESPAD provides information on a range of risk behaviours in 15/16 year olds
- Survey began in 1996, runs every 4 years – 2011 most recent

Figure 14a
Use of marijuana or hashish past 30 days. All students. 2011. Percentages. (Table 31)



[1)] **Belgium (Flanders), Bosnia and Herz. (RS), Cyprus, Germany (5 Bundsl) and Russian Federation (Moscow):** Limited geographical coverage.

[2)] **Spain, United Kingdom and USA:** Limited comparability.

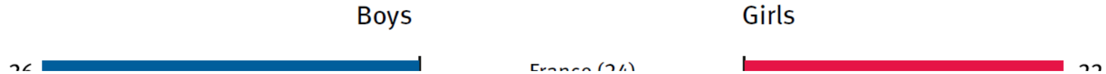
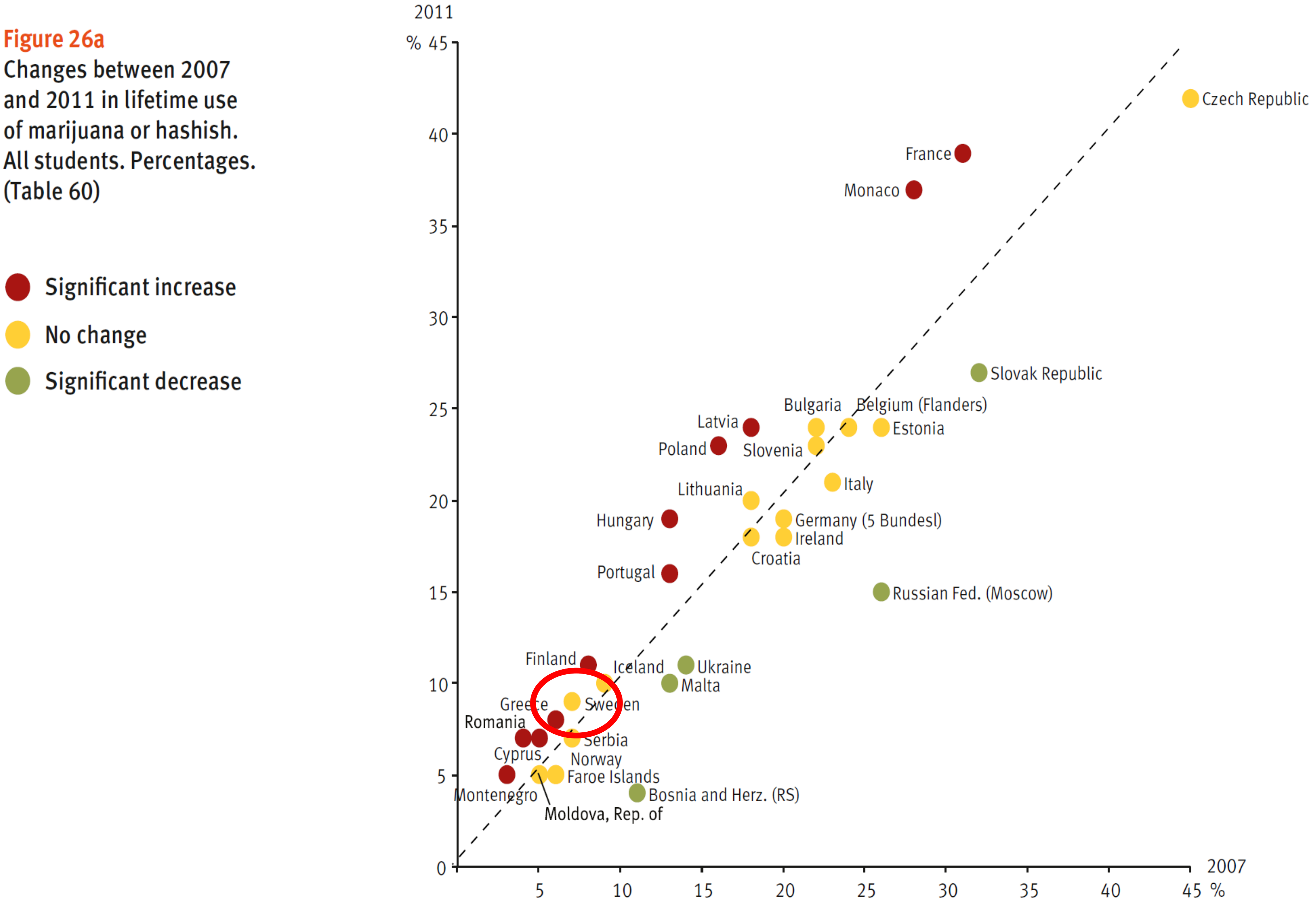
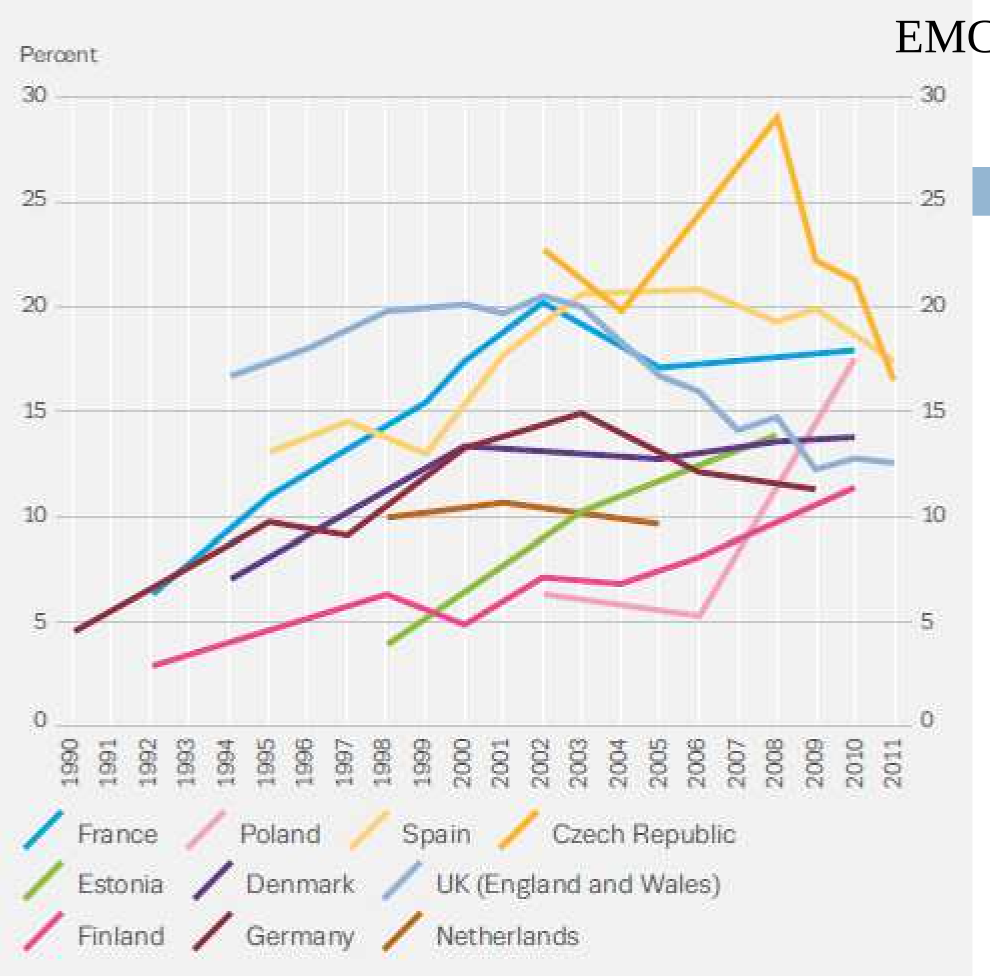


Figure 26a

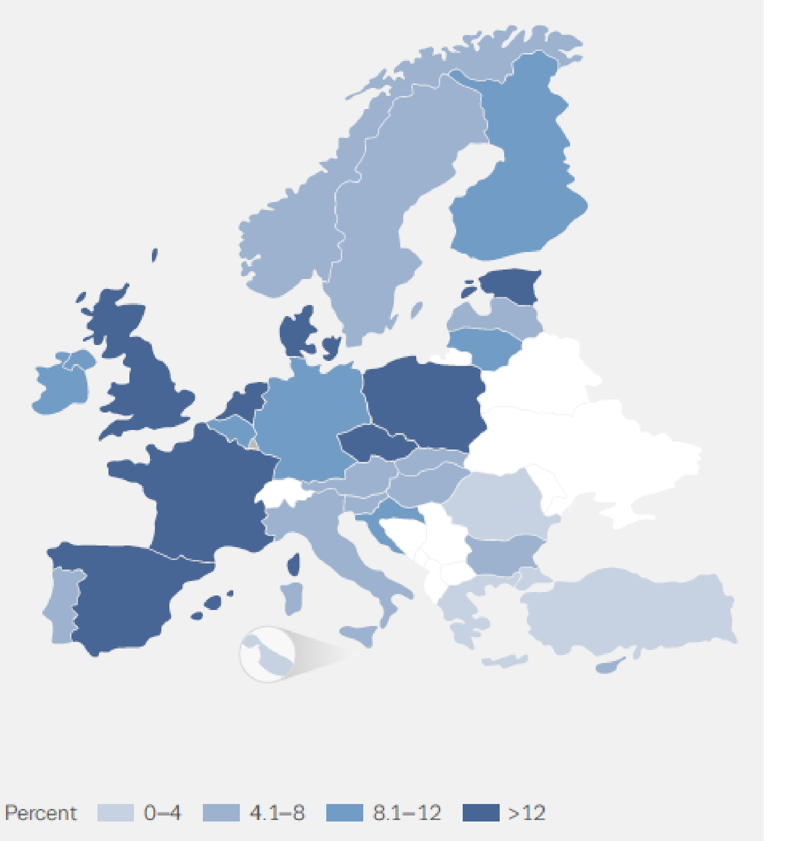
Changes between 2007 and 2011 in lifetime use of marijuana or hashish. All students. Percentages. (Table 60)



Trends in LYP of cannabis in 16-34 year olds
EMCDDA 2013 synthesis



NB: Trends for ten countries with the highest prevalence and three or more surveys.



2012 data

Cannabis Abuse Screening Test (CAST)

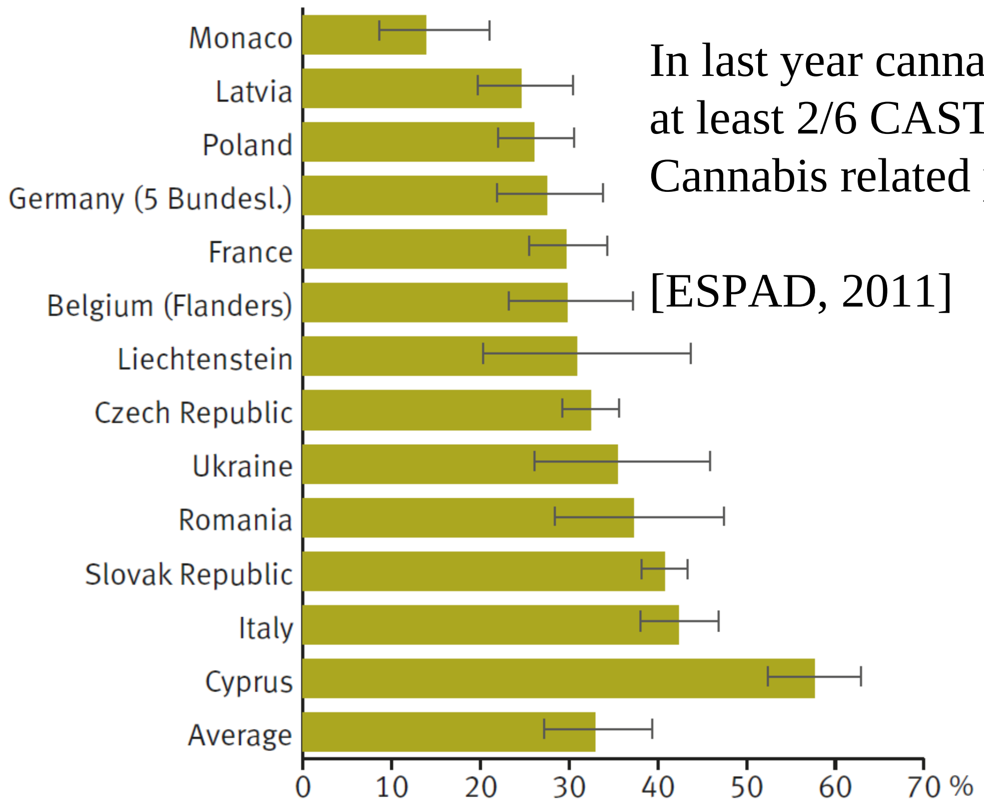
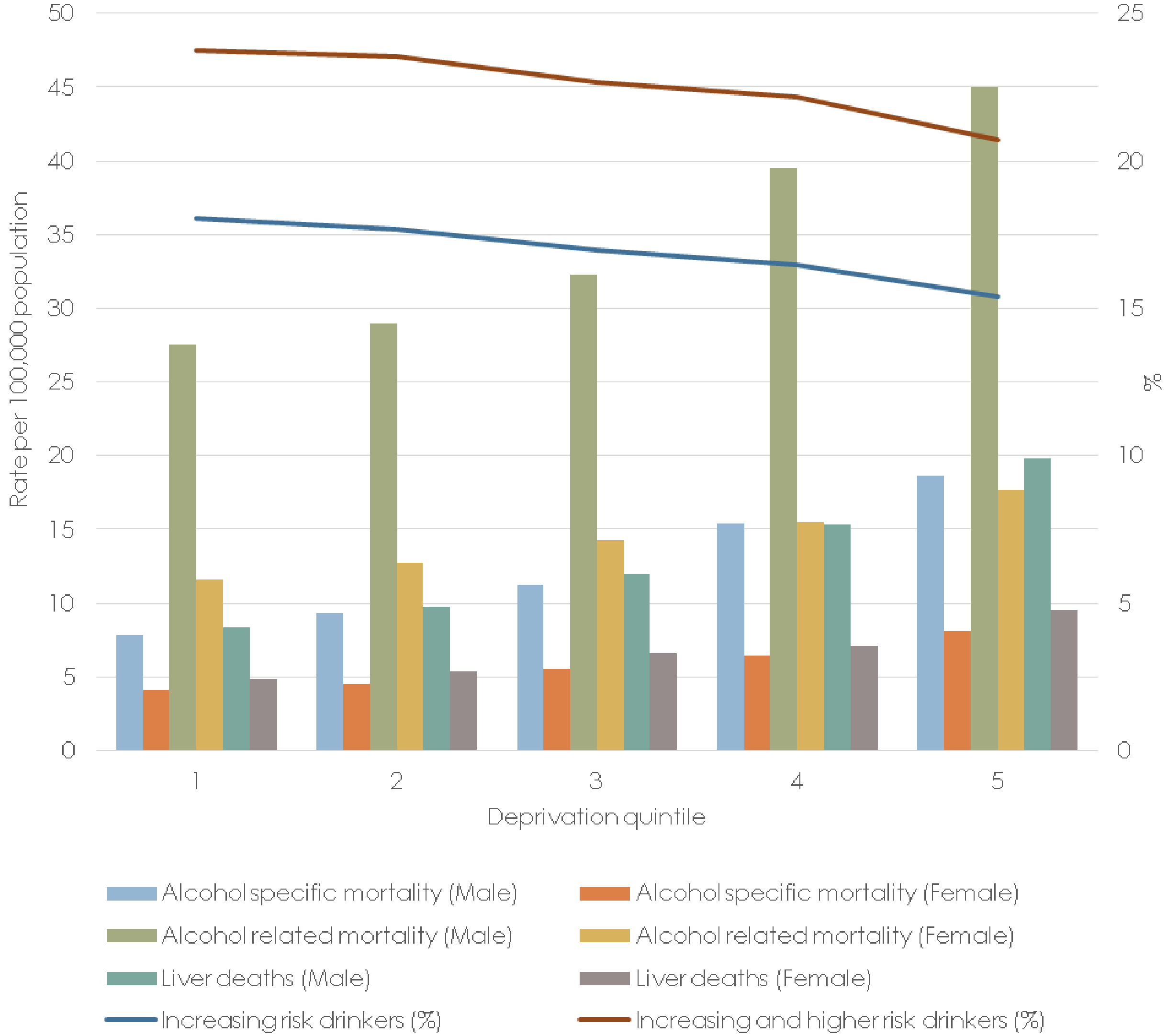


Figure B10. Proportion of high-risk users (reference group: 12-month users).

In last year cannabis users, approx. 33% endorsed at least 2/6 CAST items, indicating elevated risk of Cannabis related problems

[ESPAD, 2011]



Variations in alcohol related mortality and drinking patterns with deprivation (Local Alcohol Profiles for England, Centre for Public Health, 2012)

Explanations – same for drugs?

- Underreporting? Differences in response rate and accuracy of reporting
- Use patterns? Same amount consumed, but in different patterns
- Compounding? Differences in social and health resilience to disease and harm
- Health/prevention services? Quality and access to services
- Poverty gradient? Those who suffer harm move to poverty

Important research gaps

- Are the mechanisms leading to drug use initiation and continuation different in countries with high and low drug use prevalence (and different objectives of policy)?
  - Social norms (injunctive and descriptive)
  - Understanding of ‘deviancy’
- Are the outcomes of drug use different in countries with high and low drug use prevalence (and different objectives of policy)?
  - Prevention and treatment responses
  - Social reintegration

Opportunities to use cannabis

- Approximately 25% of ESPAD students have had the opportunity to try cannabis without subsequently using it.
- In countries with relatively high cannabis prevalence, higher number of use opportunities; converse also true
- Drug use opportunities understudied, particularly with regards to ‘actively seeking’ drugs.
- In general, males more likely to be offered cannabis than females, but equal risk of initiation once offered
- Younger age of opportunity, greater probability of eventually using cannabis, but this can be prolonged (>1 year)
- Rapidity of transition strongly influenced by environmental factors

Studies investigating determinants of cannabis use in YP – ESPAD data

- Individual perceptions are more strongly associated with cannabis use than distal influences related to social contexts (Piontek et al., 2012).
- Perceived availability; perceived harm; number of cannabis using friends **vs** price and population prevalence
- Strong implications for policy. How does national policy (and drug control) affect individual vs societal level factors?

Studies investigating determinants of drug use in YP – Eurobarometer data

- N = 15,191, young people aged 15-24 surveyed in 2002 and 2004 in EU15 countries
- Modelled association of national data on drug policy measures such as drug offending, possession decriminalisation, and presence and use of harm reduction strategies with the odds of last month drug use
- Controlled for individual level factors including sex, age, socioeconomic status, community bonds, perceptions of harm/availability/friends use

Vuolo, 2013

Findings – national level effects

Predictor	b	SE (b)	Odds Ratio	p
Possession for use decriminalised	-0.278	0.109	0.757	*
new treatment clients per 100,000)	0.358	0.090	1.431	***
substitution clients per 100,000)	0.582	0.125	1.790	***
pharmacy syringe exchanges	-0.118	0.103	0.889	
trafficking/dealing offense rate)	-0.029	0.182	0.971	
possession for use offense rate)	0.259	0.088	1.293	**
Cocaine purity-adjusted price	-0.004	0.001	0.996	***
GDP	0.0.38	0.020	1.039	
Year: 2004 (vs. 2002)	-0.176	0.160	0.838	
(Intercept)	-4.321	0.133	0.013	***
Random intercept effect (National-level)	0.00006	-	-	**

Popular views of drug use?

Understanding alternatives to 'deficit models' of adolescent drug use is important

- Adaptive or 'beneficial' role for drug use is often ignored in policy (vs maladaptive behaviour) . Important for understanding transition to problems, and in formulating intervention responses.
- Pleasure (or 'calculated hedonism') is missing from most discourse of drug use, which overwhelmingly focuses on risks and harms
- Much drug use can be understood as a result of user's pleasure motive (Karlsson, 2010)
- Drug pleasures can be considered performative acts embedded in, produced by and **reliant upon** the contexts in which they occur (Duff, 2008)
- In evolutionary terms, drugs may produce predictable short-term pleasures in an unsafe environment, where the pursuit of 'natural' pleasures may be difficult (Lende & Smith, 2002)

Explicit reasons for drug use – lots!

- **When asked, people report they use different types of drugs because:**
  - Other drugs unavailable
  - Not illegal
  - Available to buy online
  - More consistent product
  - Available to buy online
  - Price
  - Curiosity (desire for novel subjective experiences, including the good experiences of others)
  - 'Self medication'
  - Enhance energy and dancing, pro social effects
  - Enhance mood, enhance effects of other substances
  - Sensory perception, sex
  - Weight loss
  - Help concentrate, work, study
  - Losing inhibitions, and needing an excuse for socially proscribed behaviour
  - Altered states of consciousness
  - Spirituality
  - Relaxation
  - Identity
  - …

(Peters & Kok, 2009)

Not all reasons are consciously accessible and/or reportable

Drug use as an ‘instrumental action’ (Müller & Schumann, 2011)

- **Non-addictive** drug use may have a number of ‘beneficial’ effects on behaviours relevant for achievement of personal goals.
- Mechanisms establishing psychoactive drug use may have arisen in ancient environments (e.g. food selection), coming to full expression under more recent environmental changes (i.e. extraction and availability of drugs, and consumption settings).
- Drugs are used because their psychoactive effects can be *instrumentalised*.
- *Drug Instrumentalisation* is a learned behaviour to change one’s own mental state by consuming a psychoactive drug.
- Subsequently, this altered mental state allows more effective achievement of other previously established behaviours and better goal achievement.

Enhanced social interaction

- Establishment and maintenance of social groups essential for humans
- High pressure educational/work/professional environments minimise opportunities for personal social expression
- Drugs may facilitate transition from professional → personal environments by facilitating social behaviours or suppressing fatigue
- E.g. alcohol, cannabis, low dose cocaine, MDMA

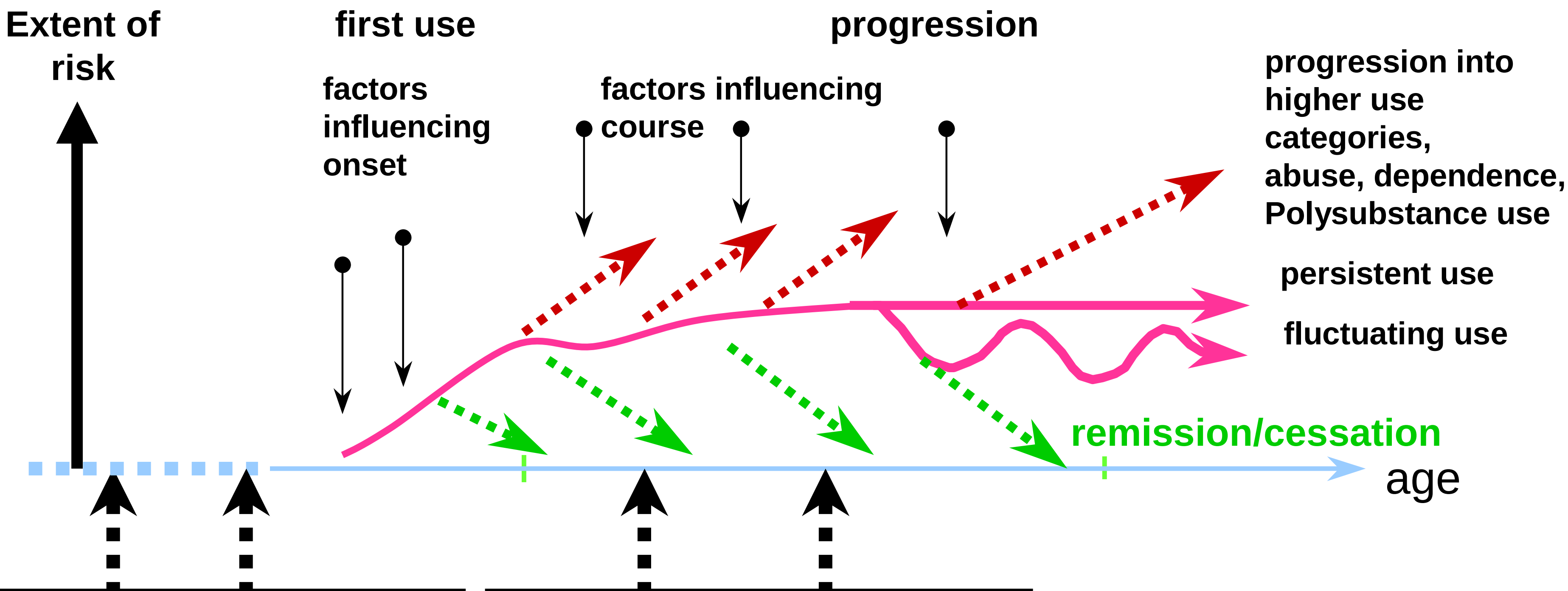
Facilitated sexual behaviour

- Related to social interaction, society restricts occasions for sexual behaviour
- A scheduled and time dependent (e.g. weekend nightlife) transition from ‘professional’ to social selves may significantly enhance the likelihood of finding a partner
- E.g. disinhibitory (and sexual effect expectation) effects of alcohol; drugs which enhance the subjective experience of sex (e.g. ecstasy)

Other examples

- Caffeine, nicotine, methylphenidate and improved cognitive performance
- Nicotine reduces cognitive deficits induced by antipsychotics
- Fast and (mostly) predictable recovery from psychological stress (tired and stressed → fresh and relaxed) – moderate alcohol, cocaine, cannabis (can control the extinction of aversive memories)
- Temporary relief from mental suffering, leading to enhanced functioning in everyday life – improvements in negative symptoms after cannabis?
- Pursuit of euphoria, one of the greatest desires in human life , allowing pursuit of other important goal directed behaviours
- …

Drug-related disorders:
Developmental course and influencing factors



Early vulnerability-/risk-factors

Variables and factors that themselves are not associated (do not produce) with negative outcomes

Later/proximal factors

Variables and factors that are significantly associated with the outcome

NB Factors that determine a behaviour aren't necessarily the same as those that account for its maintenance or escalation

What are the key risk factors for YP substance use→ problematic use?

- Many ‘Fixed’ and ‘variable’ risk factors – only the latter can be manipulated through intervention
- Contextual and interpersonal factors important, latter more easily manipulated
- Many risk factors are pre-conception/pre-natal (e.g. genetic, family environment, economic deprivation). What is the extent of control that YP have over their behaviour?
- Many of these are faced by all young people. When do they become ‘pathological’?

(Stone et al., 2012)

Substance use risk factors – many examples

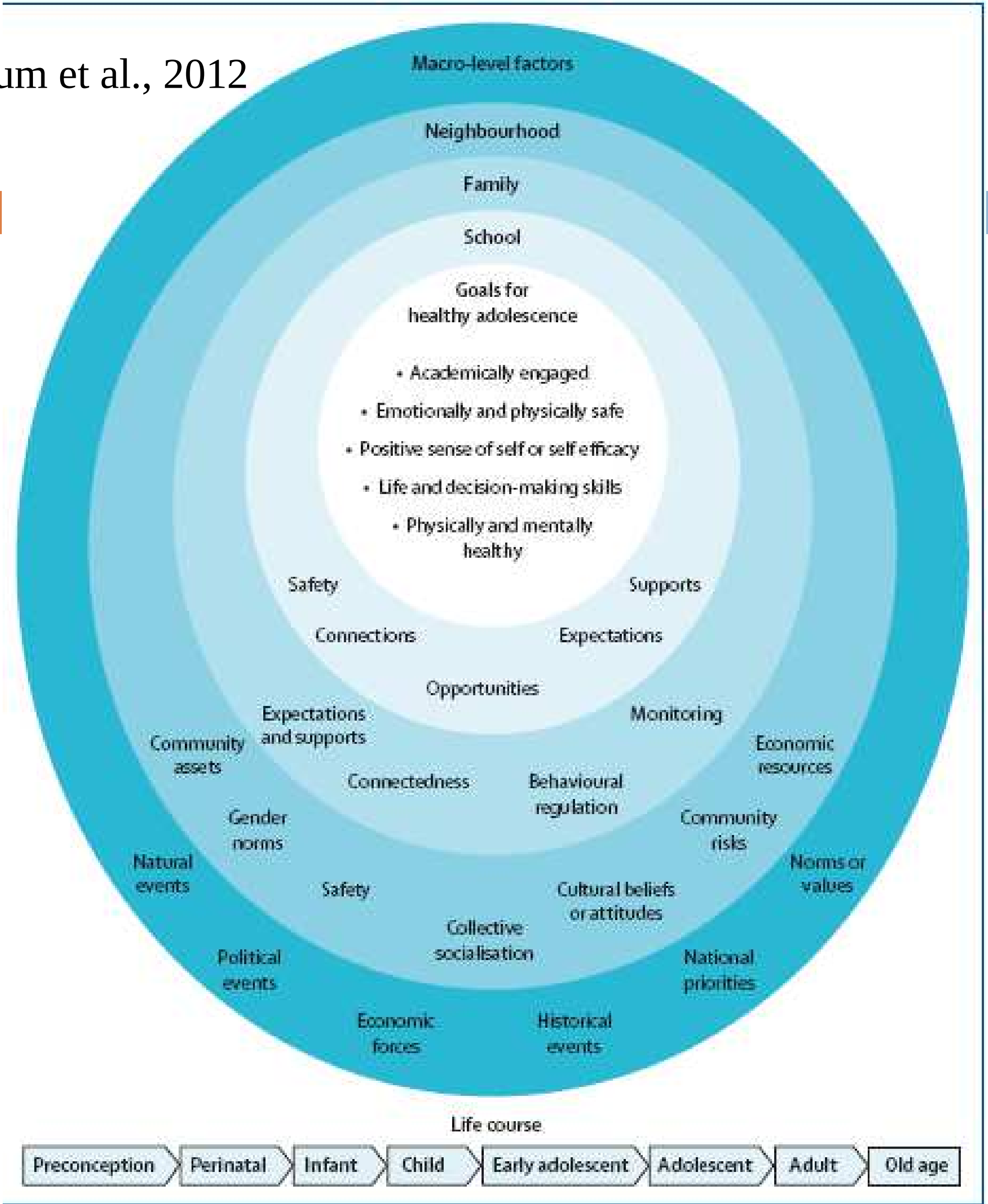
- Predicting substance use problems:
  - Male sex, peer/family history (and use), externalising behaviours, pro-substance norms, lack of conformity with societal norms, low school attachment, being in military or (some types of) sports club
- Protective:
  - Being in family home, employment, marriage and cohabitation (older YP)
- Moderators of effect:
  - Societal norms, (some) laws, price and tax on alcohol, alcohol outlet density

(Stone et al., 2012)

Societal factors

- There are also strong associations between substance use and a range of important societal, structural and environmental moderators including (but not limited to):
  - Connectedness to others, family structures, gender, community cohesion and wellbeing, inequality and exclusion, deprivation, cultural attitudes and beliefs, (formal and informal) marketing of addictive goods, attachment to social institutions, national norms and values, physical capital and economic forces.

Blum et al., 2012



- Behaviours that pose a risk to health should be considered alongside approaches that promote normal adolescent development (Viner et al., 2012)

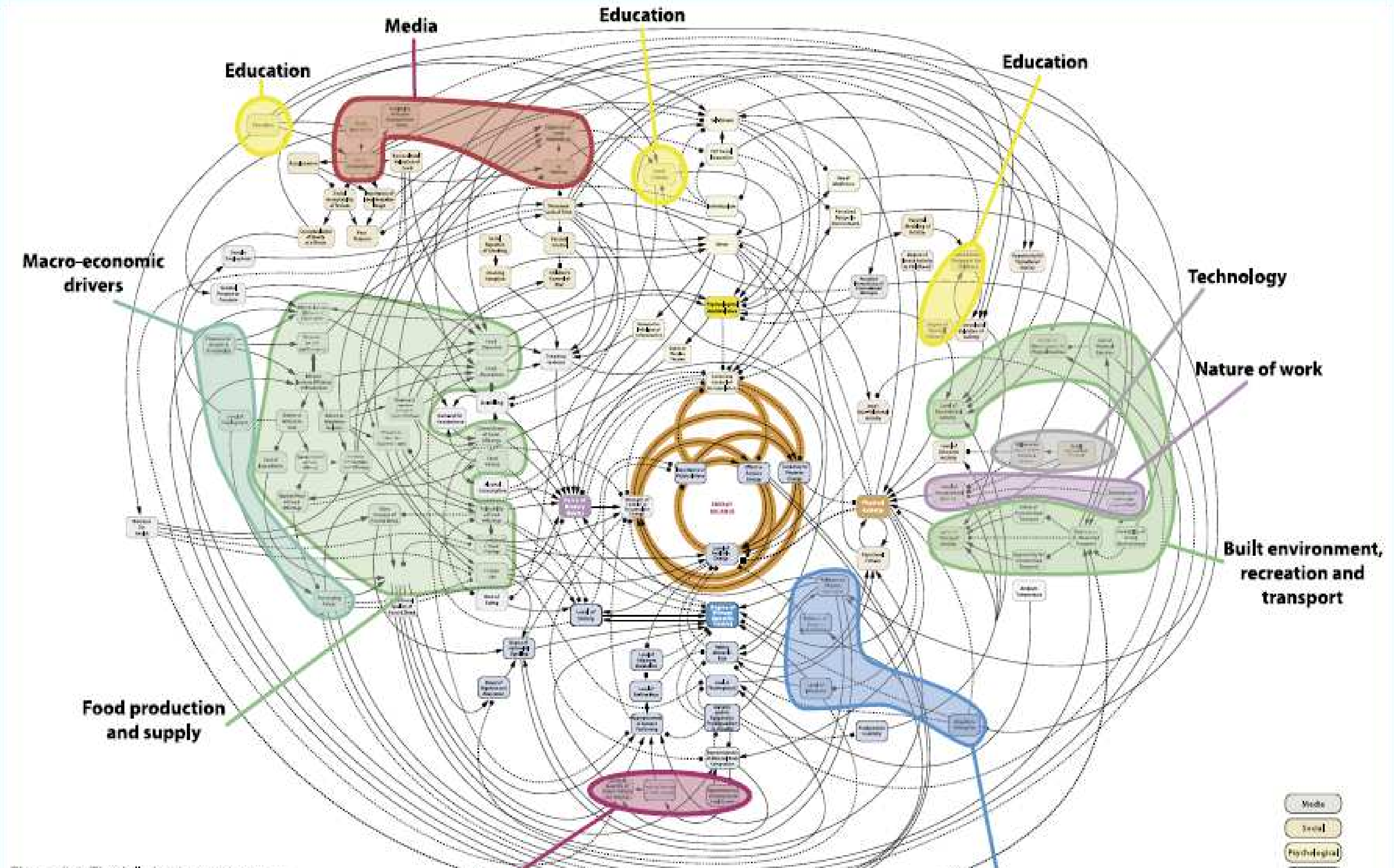
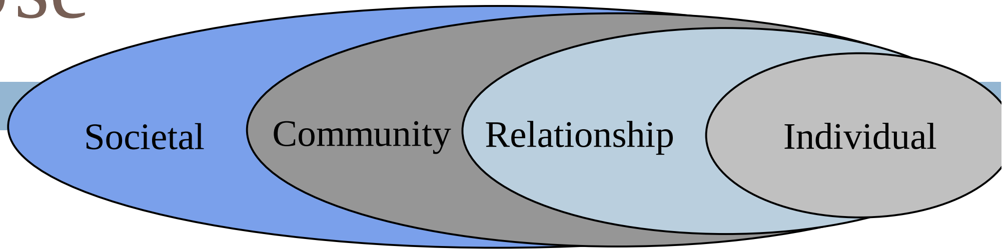


Figure 8.4: The full obesity system map, which highlights how agents outside conventional mechanisms are key enablers of and barriers to change. Variables outside of coloured areas relate to social trends and interaction or human biology. Variables are represented by boxes, positive causal relationships are represented by solid arrows and negative relationships by dotted lines. The central engine is highlighted in orange at the centre of the map.

Simplified summary of some factors influencing Drug Use



Individual
Genetic and Environmental
Personality trait/behavioural problems
(e.g. ADHD, impulsivity, sensation seeking)
Academic Performance and Education
Disposable Income
Early substance use (alcohol, tobacco)

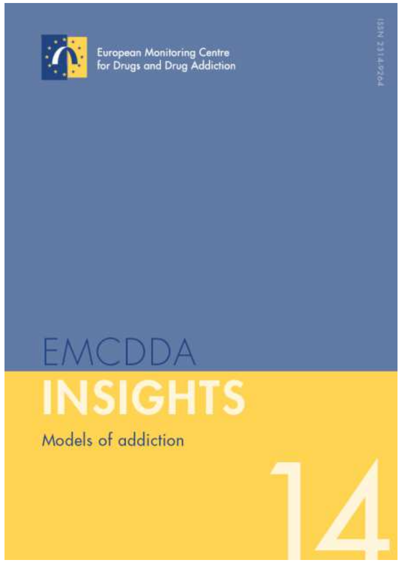
Relationship
Sibling or Peer drug use
Family structure (e.g. single parent family)
Family conflict
Parental control (over protective / unsupportive)
Poor parental education, Parental use
Early Peer rejection

Community
Neighbourhood deprivation
Availability of drugs
Opportunity for engagement in diversionary activities

Societal
Attitudes favourable to drug use
Appropriate Drug Education
Effective legal system
Socially normative beliefs
Social Marketing

Models of drug use

- Many individual level models of drug use:
  - E.g.: automatic processing, reflective choice, goal focused, process of change, biology, integrative theories
- Far fewer population level ones:
  - Social network theory
  - Economic Models
  - Communication/marketing
  - Organisation systems



Recommended reading: West, 2013; *Models of Addiction.* EMCDDA

Social Network Theories

‘Drug use is a function of the social connections between individuals who are, or are not, promoters of drug use’

- Diffusion theory – ‘innovations’, including drug use, spread through social networks
- Social contagion theory - social connections between individuals and groups
- Actor-network theory - individuals come together to form groups that act as agents apparently possessing their own intelligence

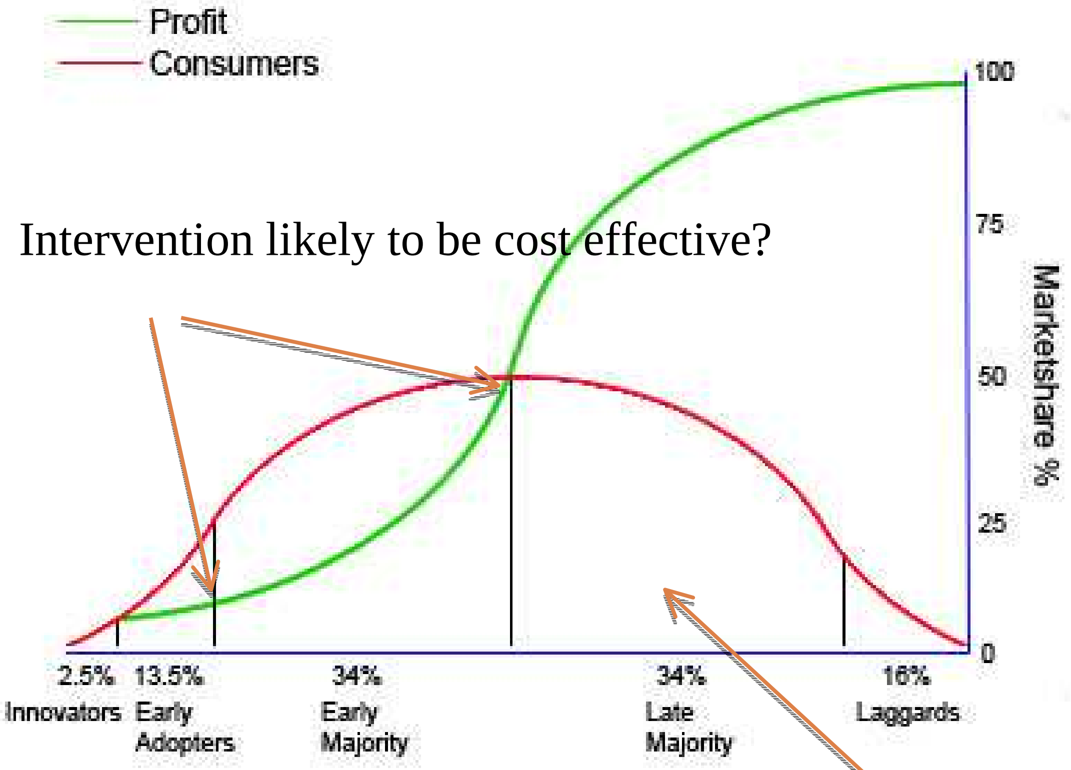
Implications for prevention:

“Social network theories imply that interventions to combat uptake of addictive behaviours should focus on **weakening social connections that promote such uptake** or **develop effective connections to counter that uptake**.”

West, 2013

Example: A ‘heuristic’ model combining social network theories approach to understanding use of new drugs

Intervention likely to be cost effective?



Innovators
- chemists, academics

Early adopters
- ‘psychonauts’

Early majority
- Dedicated clubbers

Late majority
- Mainstream clubbers

NB retailing practices

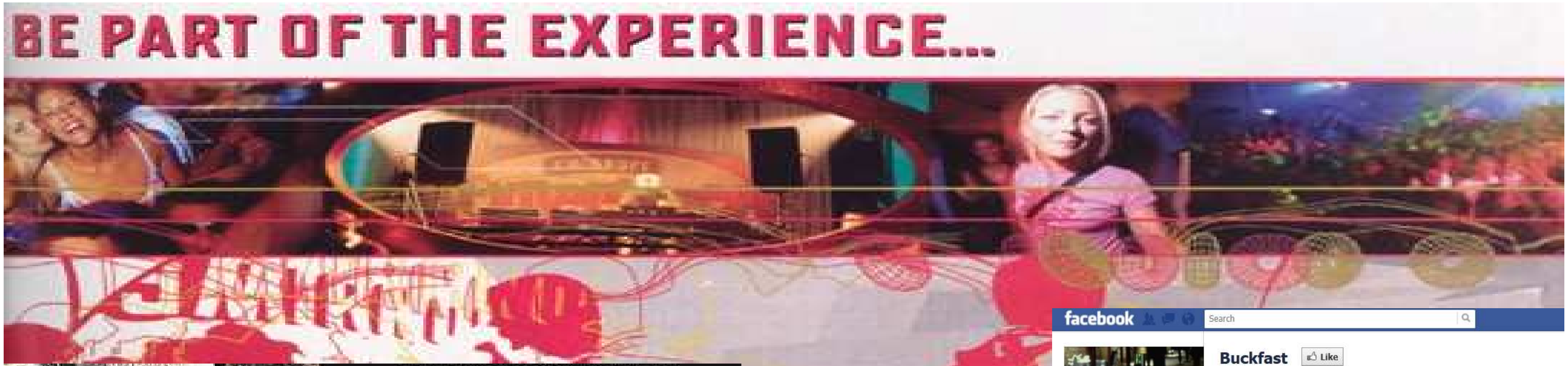
- Those who adopt an innovation (in this case an NPS) at an earlier phase of diffusion are likely to have different characteristics than those who adopt an innovation later, when it becomes more established and better known.
- ‘Innovator’ and ‘early adopter’ categories may have greater affiliation with drug using cultures, and may have higher levels of health and drug ‘literacy’
- Face higher risks and potential for harm as scientific knowledge is underdeveloped
- May be more reliant on within group derived health strategies and be more resistant to external intervention

- ‘Majority’ or ‘late’ adopters respond to the ‘success stories’ of innovators
- With respect to NPS this may relate to *relative advantage* (e.g. NPS are legal products and produce desirable and comparable effects to classic illegal drugs), *trialability* (e.g. opportunities to experiment with the NPS through legal online purchases), *and observability of drug effects* (e.g. the NPS produces perceived benefits with respect to socialisation or perceptual change).
- Such groups are the largest in number, and potentially contribute the greatest proportion of the overall population health burden caused by NPS.
- However, these groups also benefit from accumulated knowledge about the potential harms of NPS use and the best strategies to mitigate them.

Systems

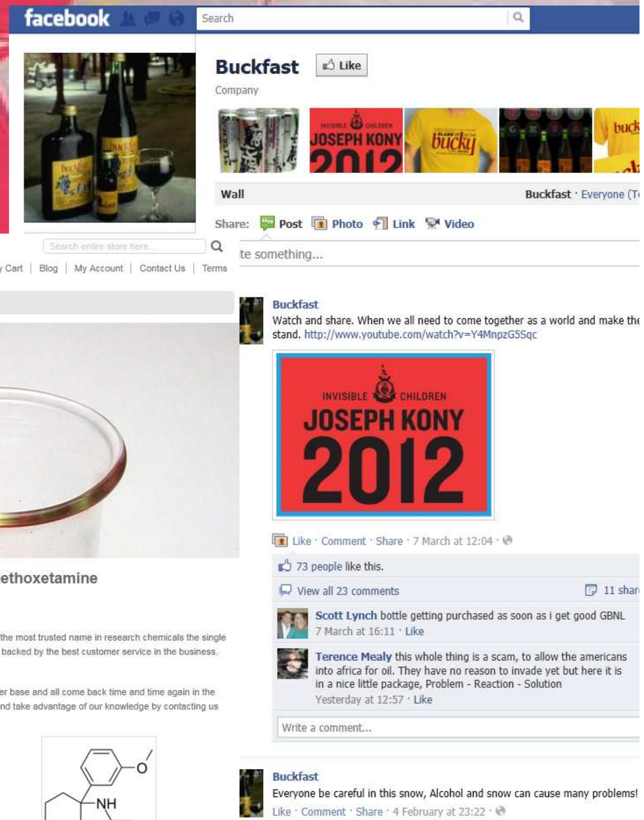
- “Addictive behaviours can be understood in terms of systems of mutually interacting components at a societal level (e.g. government, industry, public). The effects of innovation introduced into the system can be nullified by compensatory changes in another or can propagate through the system or even be amplified.”

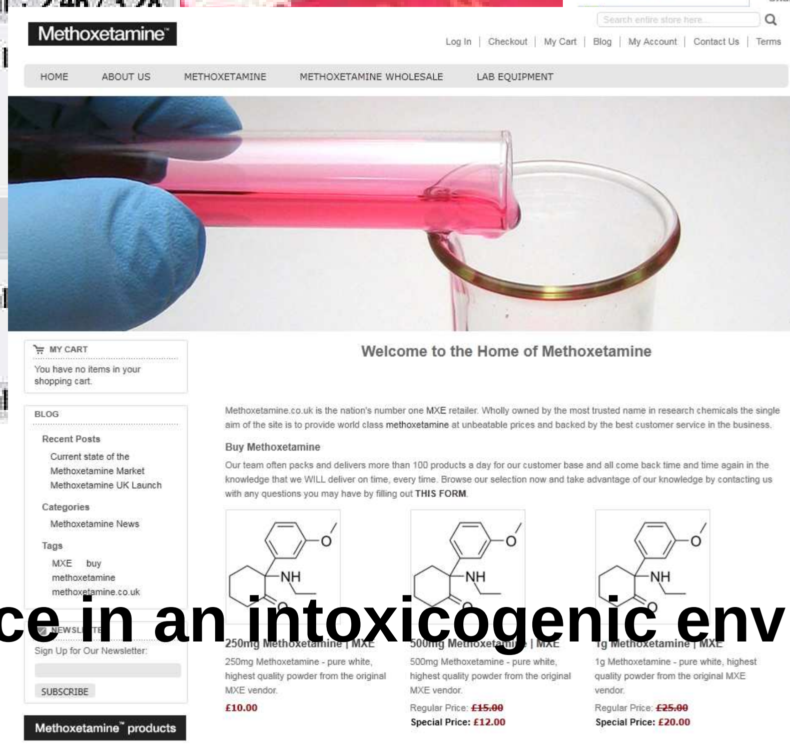
- Most commonly applied to understanding interventions, but may also be relevant to understanding ‘consumer behaviours’ such as substance use



WHAT'S ON SALE

	Price	Brand	Deal	Multiple of daily unit allowance (men / women)
Sainsbury's	£9.00	Carling	8 x 300ml	2.46 / 3.28
	£7.88	WKD Vodka Blue	4 x 275ml	
The co-operative	£7.29	Bacardi superior	1 x 35cl	
	£5.00	Budweiser	3 x 660ml	
Somerfield	£5.16	Budweiser	4 x 440ml	





Drug use takes place in an intoxicogenic environment

Life space structure and dynamics.

- In what ways can the environment influence the decision to use? Are some environments more conductive to use? Can the environment be modified to change the use behaviour of individuals, groups, or institutions?

Environmental Prevention

- **<u>Environmental</u>**: interventions to limit the **availability** of maladaptive behaviour opportunities, through system wide policies and restrictions (Foxcroft, 2011)
- Environmental prevention strategies are aimed at altering the immediate cultural, social, physical and economic environments in which people make their choices about drug use.
- Relatively little investigation, mainly focussed on alcohol
- Relevant approaches are diverse and include school drugs policies, tobacco marketing bans, reducing alcohol outlet density.
- What would environmental prevention for illegal drugs look like? Is it possible to modulate the behavioural environment under policies that prohibit entirely ?

Social learning theory

- Substance-specific cognitions are the strongest predictors of drug use
- Originate in the attitudes and behaviours of role models rather than adolescents themselves.

Involvement will have three sequential effects:

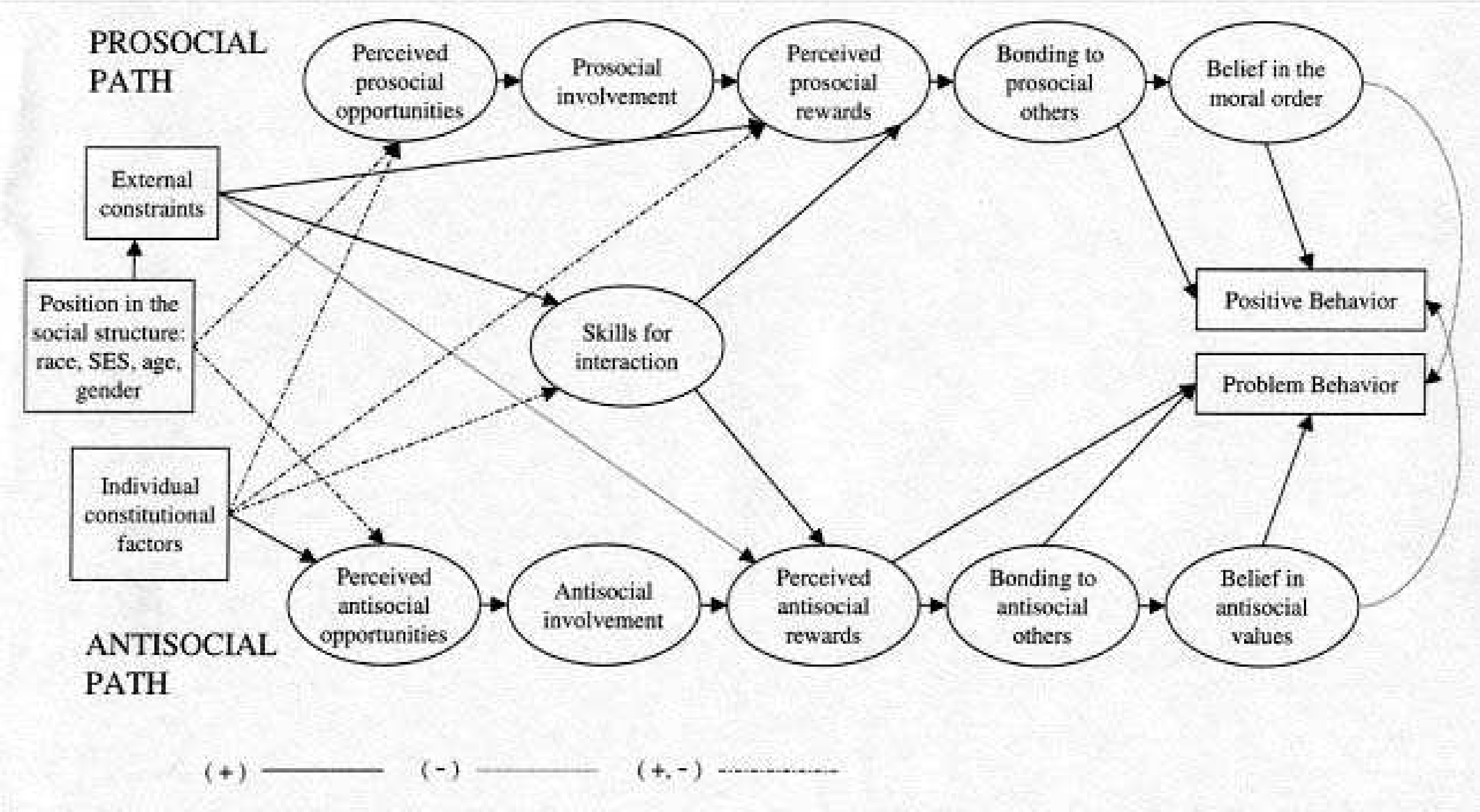
- Observation and imitation of substance specific behaviours
- Social reinforcement
- Expectation of positive social and physiological consequences of drug use

- Cost-benefit analysis

Integration

- Two critical substance-specific beliefs:
  - Observing role models use drugs directly affects outcome expectations about the consequences of substance use
  - Role models shape use and refusal self efficacy
- However:
  - The role of drug use in peer selection may be overestimated. Young drug users may self select into drug using peer groups. Often feel less committed to conventional society and role models – dynamic and changes developmentally
  - Young drug users may also project/attribute behaviour to that of peers and role models

Social interaction theory (Catalano and Hawkins, 1996)



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