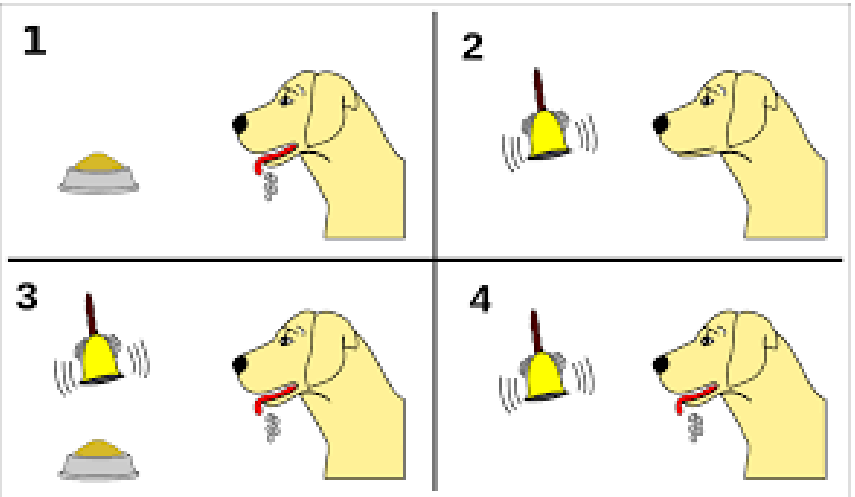
ADDICTION

PSYCHOLOGICAL BASIS OF ADDICTION

ADDICTION AS LEARNED BEHAVIOUR
Classical conditioning



- I. Pavlov & J.B. Watson
- Learning is a result of pairing of a unconditioned stimulus with a neutral stimulus. After repetition of such paring, original reaction to unconditioned stimulus becomes conditioned to the originally neutral stimulus.

Addiction and classical conditioning

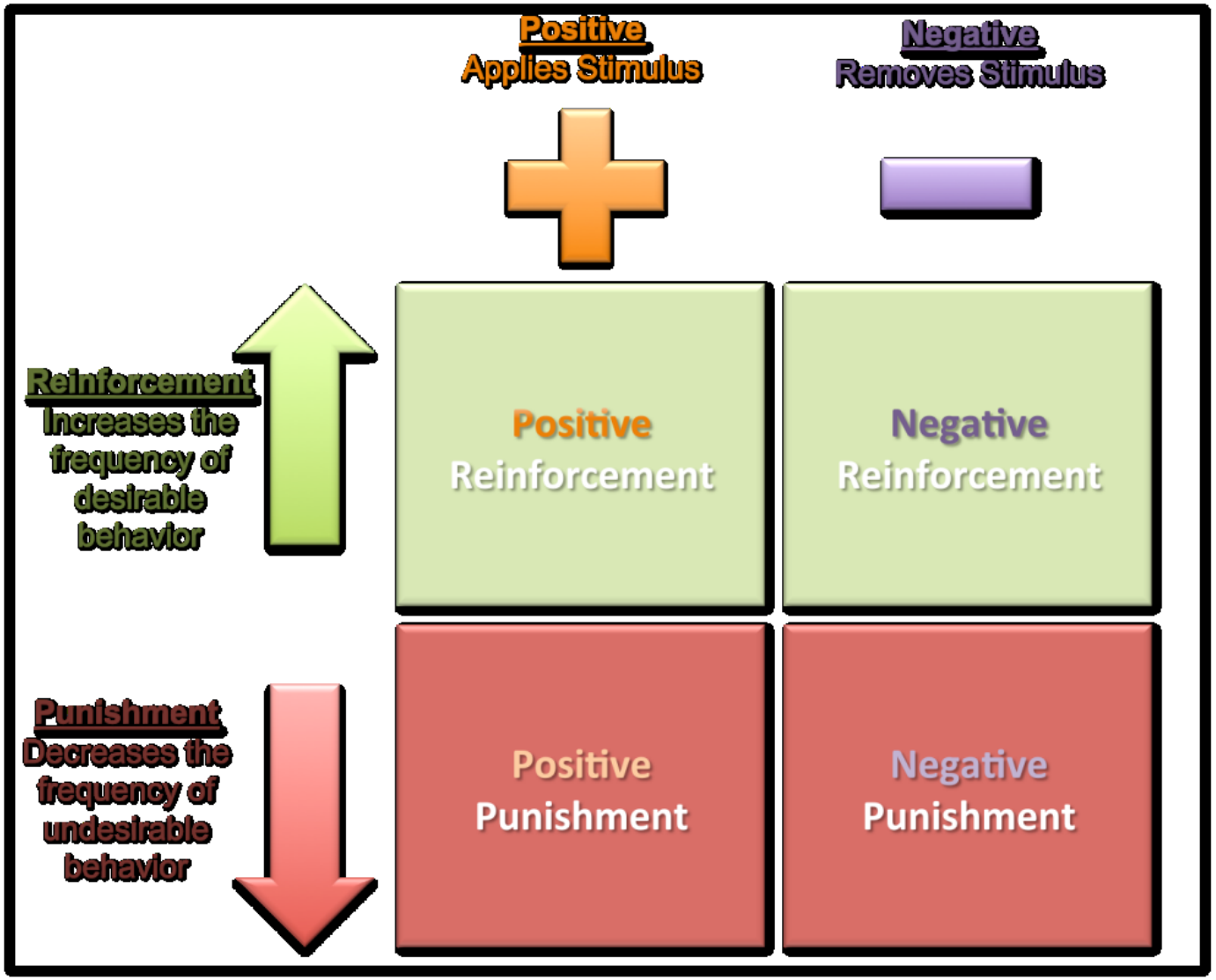
- Drug effects are strongly influenced by the context in which the drug is administered. The context usually refers to the physical environment in which the drug is given.
- Drug effect is paired with environmental stimuli – **cues** and they may trigger **craving** – overwhelming desire for the substance/behaviour
- Classical conditioning is behind key factors of addiction – craving, withdrawal symptoms, relapse
- **Conditioned drug tolerance**: tolerance and sensitization to the behavioural effects of drugs are expressed in the environment in which the drug is chronically administered but not in an environment not previously associated with the drug.

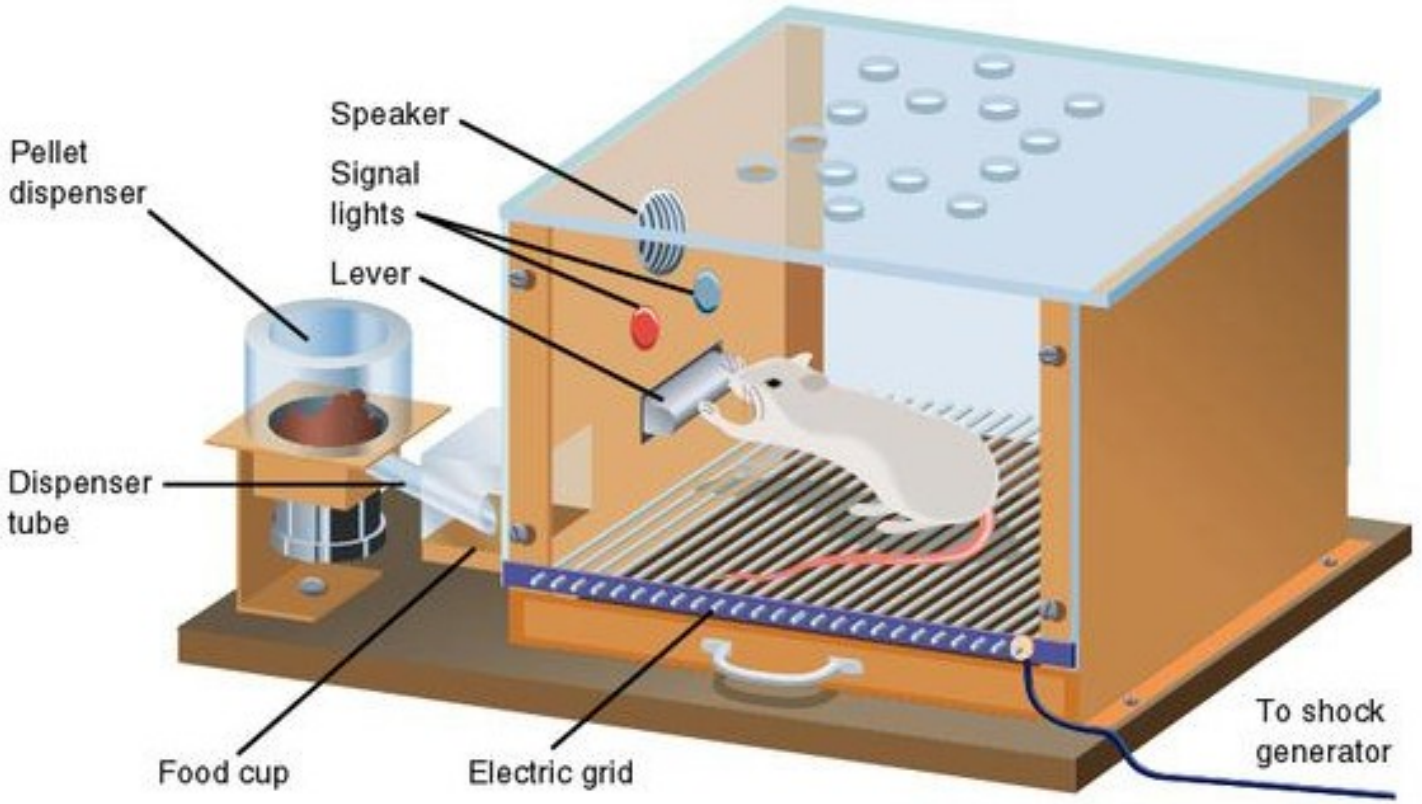
- **Cue reactivity** – learned response that involves psychological and physiological reactions to drug related cues
- Cues are the most important factors of relapse
- Withdrawal model – cue reactivity should resemble withdrawal-like states (i.e. should produce opposite to the drug effect)
- Incentive model – cue reactivity should be similar to positive motivational state (i.e. should produce somewhat similar to the drug effect)
- We usually see mix of these two reactions, however, in alcohol/cocaine/tobacco/behavioral addictions incentive reaction is stronger while in heroin withdrawal reaction is stronger

- Prevention and treatment should focus on blockade of cues (e.g. via cue exposure) – associations then become gradually weaker and weaker – it is a long process with uncertain results. It takes long time to build the cues and even longer to destroy them

ADDICTION AS LEARNED BEHAVIOUR
Classical conditioning

- B.F. Skinner
- Experience of reinforce or punishment increases or decreases likelihood of certain behaviour


Positive
Applies Stimulus
Negative
Removes Stimulus
Reinforcement
Increases the frequency of desirable behavior
Positive
Reinforcement
Negative
Reinforcement
Punishment
Decreases the frequency of undesirable behavior
Positive
Punishment
Negative
Punishment

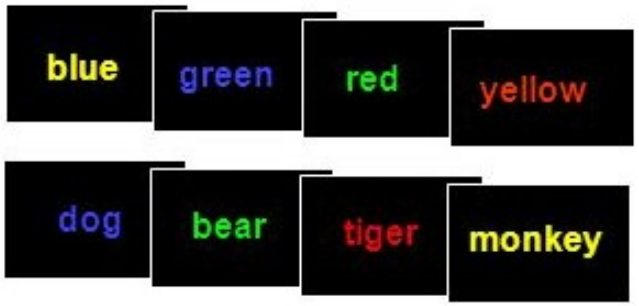


https://www.youtube.com/watch?v=I_ctJqjlrHA

- **Positive reinforcement**: drugs and certain behaviours (sex, gambling) are strongly pleasurable and serve as positive reinforcer
- **Negative reinforcement**: decreased level of drug in body unbalances physiological system - withdrawal symptoms
- **Occasional reinforcement** – somewhat randomized reward produces much stronger reinforcement - activity to get the reward increases and is more resilient to change.
  Secondary reinforcement – cues learned via classical conditioning may be experienced as reinforcers themselves

- Drugs and certain behaviours are powerfully rewarding themselves, but addiction arises through experience and repetition
- Involved processes are automated and are not reflective
- Pre-conscious cue processing - addiction related cues are mentally prioritized without knowing
- Frequently conflict between not conscious/learned motivation and conscious attitude
- Various people vary in their proneness to reward and punishment (e.g. Cloninger‘s typology of alcoholism)

Colour-Word Stroop Test



Key measure:

Mean RT for target words

– *Mean RT for matches neutral words*

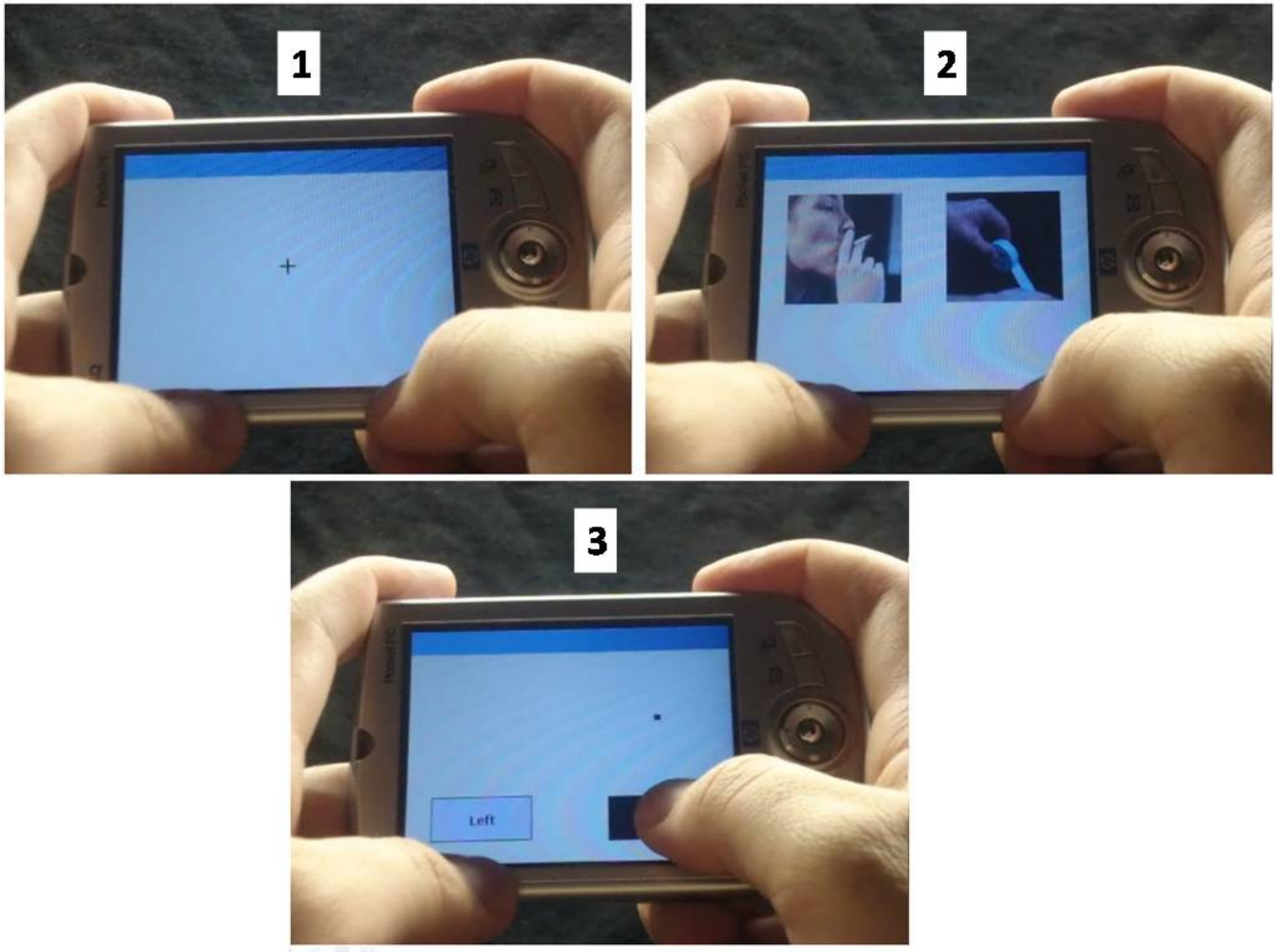
= **Interference Score**

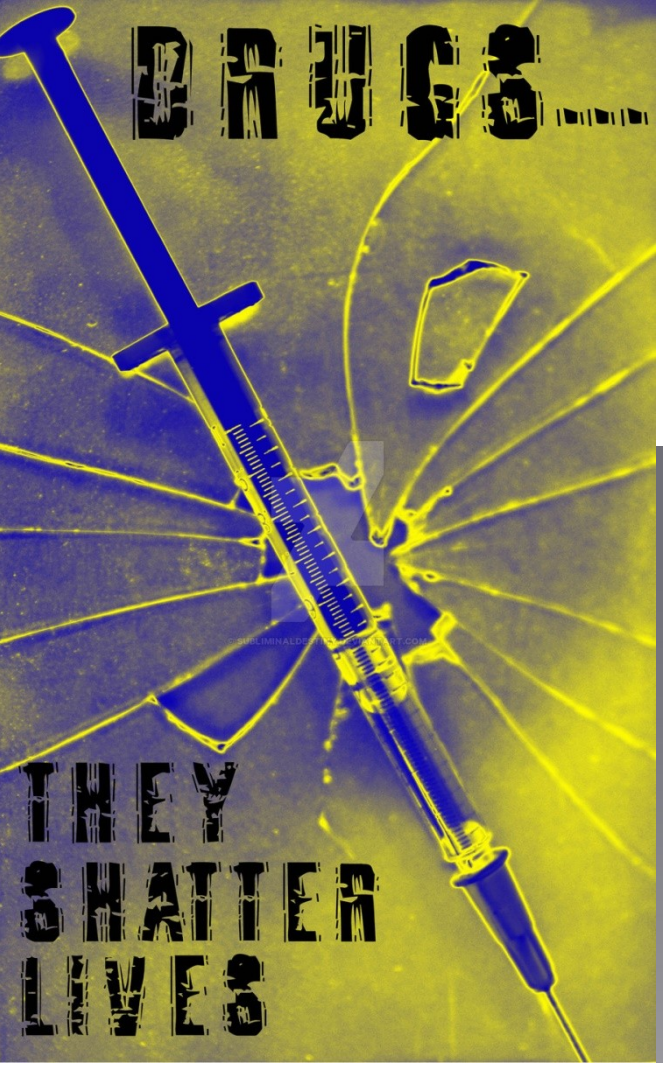
Addiction Stroop Test

→ Measures the degree of involuntary attention to disorder-related words compared with neutral words.

→ Attentional bias (interference) results from the emotional salience of stimuli which are related to the person's current concerns.

Visual probe task



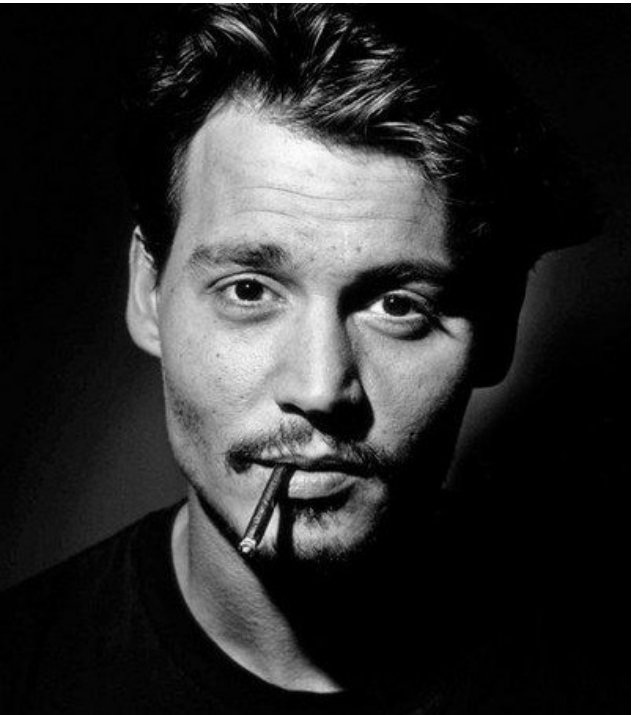

DRUGS...
THEY
SHATTER
LIVES

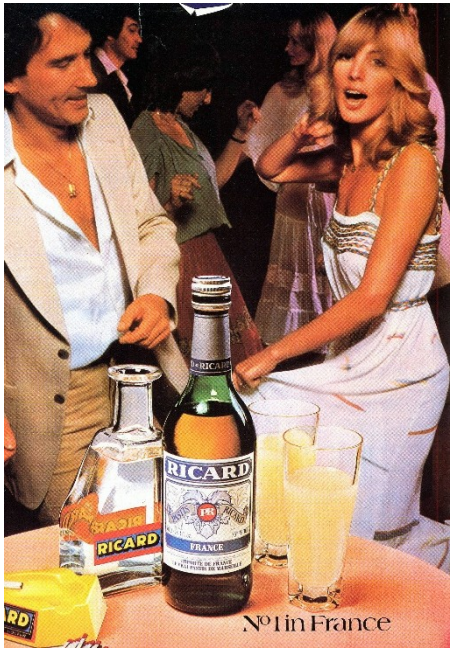

Drugs Ruin Lives

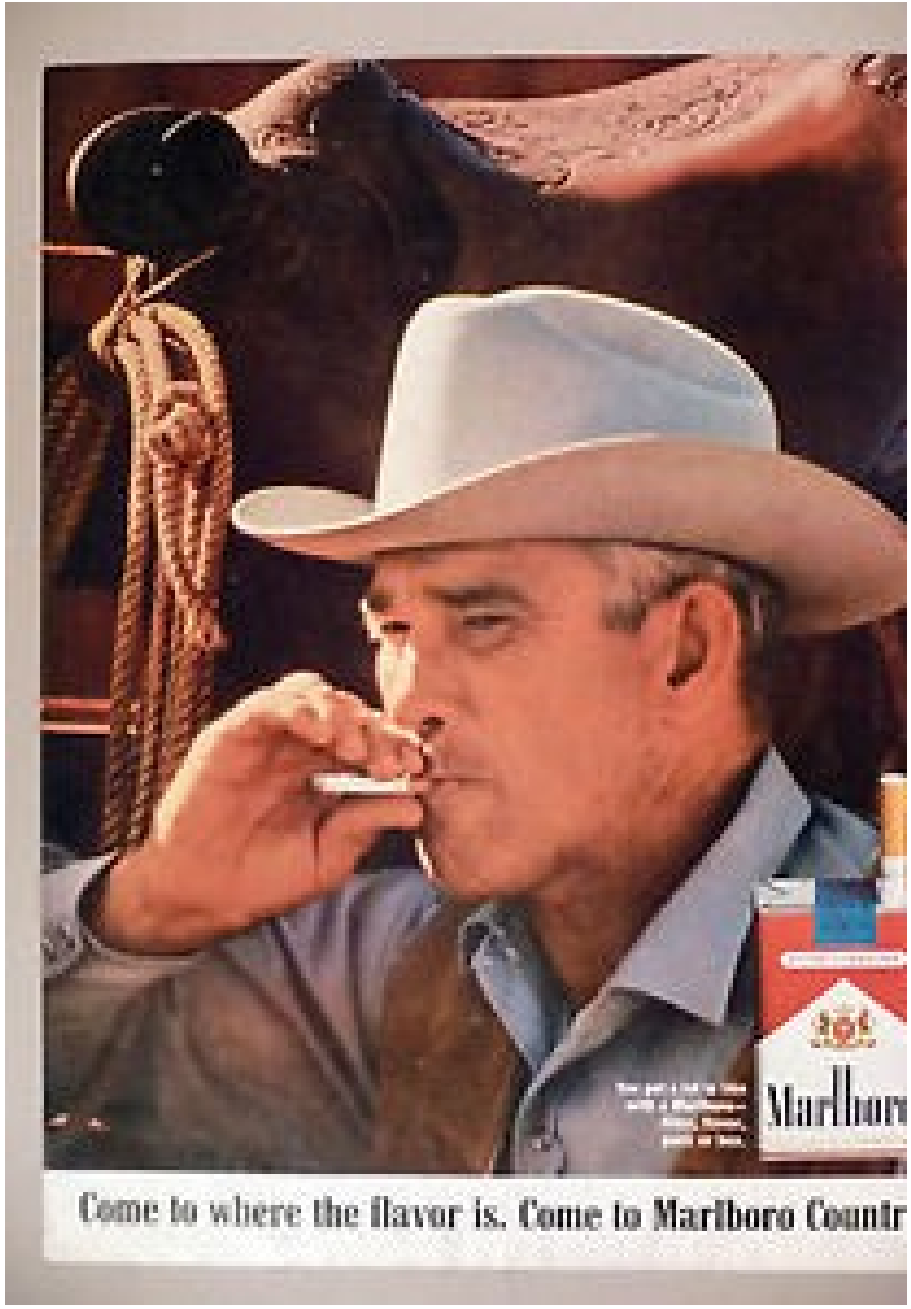
ADDICTION AS LEARNED BEHAVIOUR
Social learning theory

- Albert Bandura
- Learning in social environment through observing and listening to others
- Addiction is learned through imitation of and identification with role-models
- Social identity – whom I follow, what is the group I belong to, what is the group I would like to be part of







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SELF-EFFICACY

- Albert Bandura
- Individual believe in own ability to perform certain behaviour
- High self-efficacy – set higher goals, invest more effort and energy. More resistant to stress and negative experience and able to try various coping strategies.
- Low-self efficacy – lower effort, cease treatment more quickly. Lower stress resistance, often use substances as the first coping strategy
- Learned hopelessness – opposite to self-efficacy. When the person repeatedly experience aversive stimuli. Sometimes a product of repeated abuse, trauma. Can lead to enduring negative mood states, addictive behaviours, cycles of poverty

SELF-MEDIACATION MODEL OF ADDICTION

- Taking drugs or involvement in problematic behaviour is a coping strategy with negative and unpleasant mood states and/or negative life experiences
- People with some mood disorder or problematic affect regulation are more prone to develop addiction - e.g. higher depressiveness, higher anxiety, personality disorders like antisocial or borderline
- People with experience of child abuse, trauma or childhood neglect are much more prone to develop addiction

- Psychodynamic psychology – emphasizes feelings and emotions as forces that shape our behaviour, focus on early child experience
- S. Freud – psychoanalysis - use of drugs with oral administration (alcohol, tobacco,…) are a form of regression to the first year of life (oral stage – when pleasure is experienced through mouth). Oral stage is about gaining trust in others – addicts usually have underdeveloped trust and show unhealthy relationship profiles: avoidance and/or overdependency.

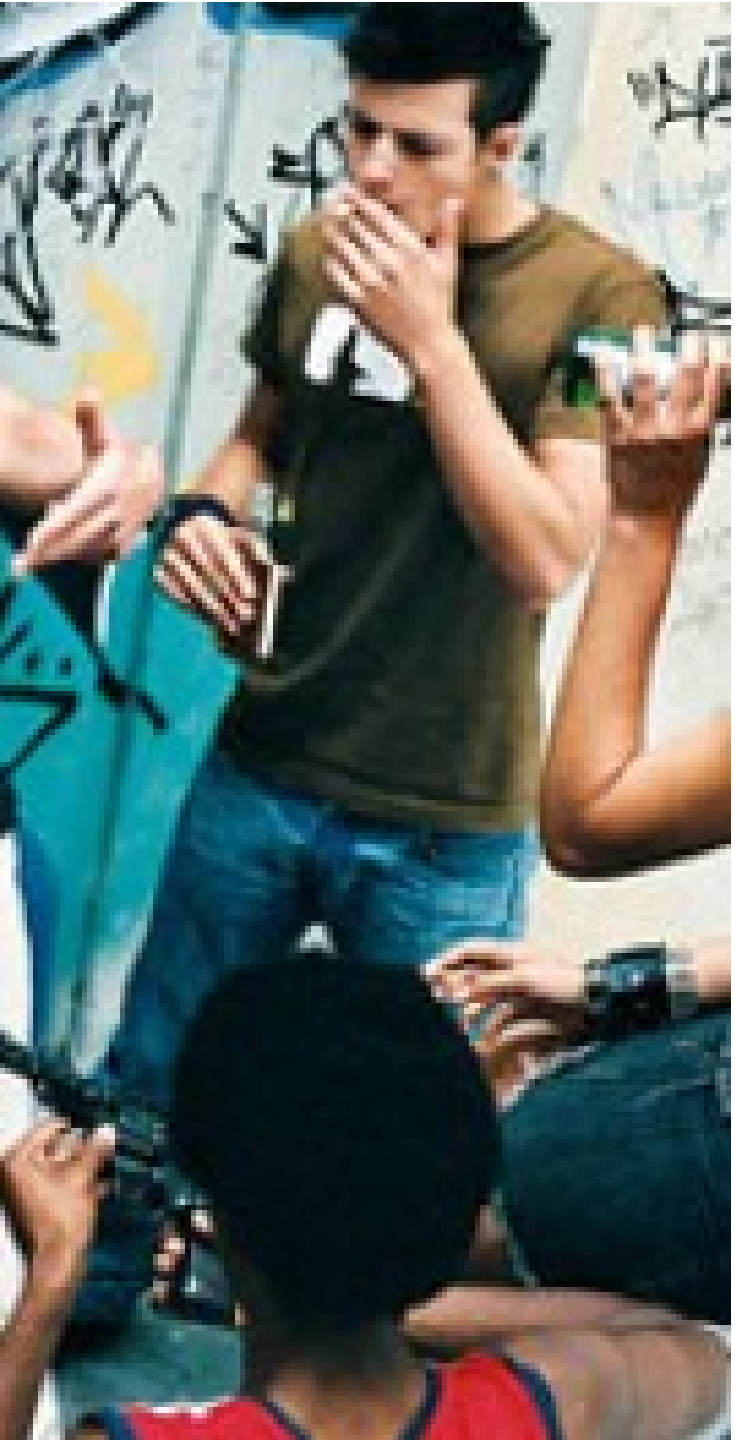
- M. Klein – object relation theory
- Birth and first months are extremely stressful for the child. Chaos, anger, fear are the dominant emotions – they must be cultivated in contact with parenting figure. Parenting figure is internalised as a mental object – parent (mother) within
- Relationship with this internalized object affects social relationships throughout our lives - what develops in early childhood stays for lifetime
- Good object relation = good affect regulation (positive mood, ability to cope with unpleasant, more resilient), poor object relation = poor affect regulation.

- H. Harlow, J. Bowlby, M. Ainsworth – attachment theory
- https://www.youtube.com/watch?v=OrNBEhzjg8I

- Children internalize cognitive and affective representation of self and others based on their early attachment experiences.
- Attachment to the parenting figure (significant other) is created especially in the first 6 months.
- Attachment attitudes are persistent and lead our relationship to others and our affective regulation during our lives

Attachment Style	Parental Style	Resulting Adult Characteristics
Secure	Aligned with the child; in tune with the child's emotions	Able to create meaningful relationships; empathetic; able to set appropriate boundaries
Avoidant	Unavailable or rejecting	Avoids closeness or emotional connection; distant; critical; rigid; intolerant
Ambivalent	Inconsistent and sometimes intrusive parent communication	Anxious and insecure; controlling; blaming; erratic; unpredictable; sometimes charming
Disorganized	Ignored or didn't see child's needs; parental behavior was frightening/traumatizing	Chaotic; insensitive; explosive; abusive; untrusting even while craving security
Reactive	Extremely unattached or malfunctioning	Cannot establish positive relationships; often misdiagnosed

- Insecure attachment is strongly related to lifetime depressiveness and affective disorders, low self-esteem, lower social support. It creates fertile ground for substance use and other behavioural addictions
- Self-medication model does not explain all cases of addiction – many addicts do not have affective difficulties, insecure attachment, child trauma or neglect.



DEVELOPMENTAL MODEL OF ADDICTION

- Two main risk periods – early childhood (attachment) and adolescence
- E. Erikson – psychosocial stages of development – adolescence is about identity crisis, time of storm and stress, and increasing power of peer groups. Substance use may develop as a mean to gain status in peer groups, it may become part of personal and social **identity**
- Addiction may be understood as an **externalized pathological behaviour**. Externalized behaviour includes conduct problems (verbal and physical aggression, lying, risk taking, vandalism), ADHD, various addictions
- Any externalized behaviour may be replaced by another externalized behaviour
- Externalized behaviour may occur in childhood as a reflection of internalized disorders (anxiety, trauma, neglecting parental approach)