THE PARALLEL DICHOTOMIES OF DRIVE AND AFFECT
IN PSYCHOANALYSIS, NEUROSCIENCES AND COGNITIVE PSYCHOLOGY

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CURRENT NEUROPSYCHOANALYTIC RESEARCH

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Based on radically different empiries (resp. psychoanalytic clinic, neurosciences and psychological statistical methods), three different domains concerned with *what it means to be human*, have independently formulated **3 parallel dichotomies of appreciation or apprehension**:

FROM THE THEORY…

Psychoanalysis

PLEASURE

Freud's experience of satisfaction

Hunger
→ crying
→ interpretation
→ feeding
→ tension relieve
→ **pleasure**
→ crying as adequate (motor) act becomes gratifying
→ ***jouissance***

discharge or tension release induced by an adequate act (often tied to the consumption satisfying the lack at the origin of the drive) (Freud, 1915)

«*Jouissance* appears not purely and simply as the satisfaction of a need, but as the satisfaction of a drive » (Lacan, 1959-60)

JOUISSANCE

***CLINICAL DEFINITION* : paradoxical satisfaction from the symptom (Lacan, 1969-70)**

benefit gained from the motor tension underlying the action which was (once) adequate in bringing relief to the drive (Bazan & Detandt, 2013)

(1) The **experience of satisfaction** gives both pleasure (discharge through consumption) and *jouissance* (reward tied to body tension).

(2) Whenever a similar body need reappears, or when "the Thing" is reencountered, the memory trace of the experience of satisfaction is reactivated. **This reactivation brings about, in and by itself, *jouissance* through motor tension.**

2 kinds of body tension

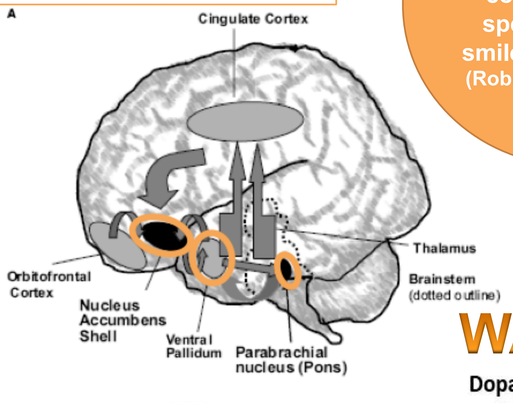
- a variable part, in response to a graspable "attribute" (or *affordance*) prepares an adequate act, such as accomplished before during an experience of satisfaction
- a constant part, in response to the "specific" part or essence of the object, which allows it to be identified as such even if its usual attributes have changed

(3) The **commemoration of a trait** which was once "*jouissive*" results in revived *jouissance* and thereby institutes the **compulsion to repeat.**

Neurosciences

LIKING

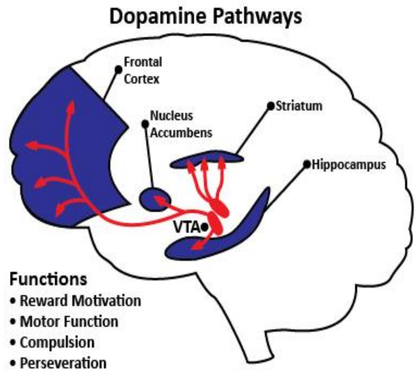
Subcortical opioïd *« hot spots »* including the nucleus accumbens, ventral pallidum, parabrachial nucleus (Berridge, 2009)



what is expressed by facial and behavioral mimics conserved over species such as smiles and laughter (Robinson & Berridge, 1993)

WANTING

amount of motor activation which the organism is ready to invest in order to obtain a reward (Berridge, 1996)



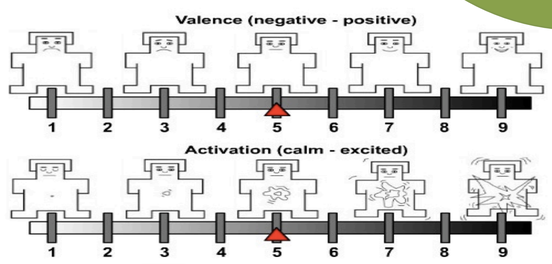
Mesolimbic dopamine pathways with ascending projections from ventral tegmental area to the nucleus accumbens (and prefrontal cortex).

Cognitive Psychology

Multivariate studies (Osgood, Suci, & Tannenbaum, 1957; Bradley & Lang, 1994; Russell & Mehrabian, 1977) have consistently *found two main factors accounting for the most variance among affect descriptors* in emotional language (to describe pictures, qualify stories,…). Despite the plethora of different emotion words, the underlying structure of affective language has a *relatively simple dual structure* (Lang, 2010)

VALENCE

hedonic valence «humans give to things» qualified as positive, pleasant and «appetitive» (preservative / attractive) **versus negative, aversive and « defensive »** (protective) **(Lang, 2010).**



Self Assessment Manikin affect scale (Bradley & Lang, 1994)

AROUSAL

intensity of vigor with which human react (Bradley & Lang, 1994.); intensity of bodily activation (Verschuere, Crombez & Koster, 2001)

Pleasure								
(1) Bored	1	2	3	4	5	6	7	Relaxed
(2) Despair	1	2	3	4	5	6	7	Hopeful
(3) Unhappy	1	2	3	4	5	6	7	Happy
(4) Melancholic	1	2	3	4	5	6	7	Contented
(5) Annoyed	1	2	3	4	5	6	7	Pleased
(6) Dissatisfied	1	2	3	4	5	6	7	Satisfied
Arousal								
(1) Calm	1	2	3	4	5	6	7	Excited
(2) Unaroused	1	2	3	4	5	6	7	Aroused
(3) Dull	1	2	3	4	5	6	7	Jittery
(4) Relaxed	1	2	3	4	5	6	7	Stimulated
(5) Sleepy	1	2	3	4	5	6	7	Wide awake
(6) Sluggish	1	2	3	4	5	6	7	Wild

Semantic differential scale for the dimensional structures of reports on objects, events and situations **(Mehrabian & Russel, 1974)**

Pleasure and *jouissance*, liking and wanting, being distinct, human suffering (and psychopathology) results from motor patterns remaining *jouissive* or wanted - while no longer pleasurable, adequate nor liked (Bazan & Detandt, 2013).

ADDICTION

Jouissance without pleasure
Addictions, whatever the object, are pathologies of jouissance (Le Poulichet, 1987), i.e. so-called « morbid *jouissance* » implying the persistence of the addictive behavior despite negative consequences and reports of lack of pleasure and even of displeasure.

Wanting without liking
…«might be a way to conceive irrational desires that underlie addiction» (Berridge, 2000): DA systems mediate the incentive salience of rewards, such as drugs, by modulating their motivational value relatively independently from their opioid hedonic value (Robinson and Berridge, 1993).

Arousal independently of valence
Studies show more arousal towards addictive stimuli independently of the the stimulus (ex. an image) being evaluated as positve or not. (Moeller, 2012)

AFFECT (expression motricity, other-oriented)			DRIVE (survival motricity, self-oriented)		
Pleasure	**Liking**	**Valence**	***Jouissance***	**Wanting**	**Arousal**
tied to the consumption of an object which satisfies a need		based on "appetite", "attraction"	tied to a body action which was (once) adequate / rewarded (Bazan & Detandt, 2013)		activation in the Mehragian/Bradley&Lang-theory is "of the order of the drive" (Hebb, 1955)
results from the release of tension / homeostasis		results from (the satisfaction of) "survival needs" (Beadley & Lang, 1994)	results from the increase in tension/bodily activation induced by the encounter with the rewarded stimulus/Thing or by the return of the need		results from a "combination of activity and alertness" (Lang, 2010)
shared and communicated	measured through "facial expressions"	communicated through language	secret, "mute" (and transgressive)	indifferent to "facial expressions" measures	reflected in language

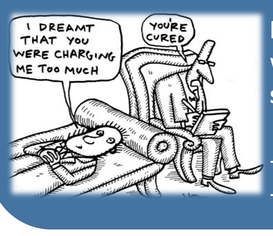
…TO THE LAB

Population : **smoking addicts** vs control

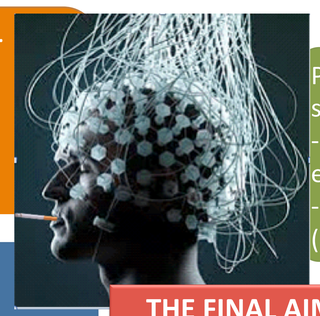
Wanting

Incentive salience towards addictive stimuli (Berridge, 1993) can be spotted by **attentional and approach biases** to drugs cues (Mogg, 2003). **Wanting** is thus measured in two ways:
-direct way: ***approach bias task*** (incentive salience): control versus addictive stimulus in a NoGo task: participants alternate GO or NOGO for addictive stimuli (and vice versa for control stimuli); RTs are measured.
-indirect way: ***inhibition bias task*** (overinterest towards addictive stimuli): modified NoGo task*:* letters M ("GO") or W ("NO GO") printed over either neutral or cigarette background. ERP P300 is supposed to reflect inhibition (Hansenne, 2000*a,b*)

Jouissance



Free associations, after probing for cigarettes, on the words "LIFE", "ANXIETY", "SMOKE" and a FREE ASSOCIATION without a word prime. Audio records are given to **"naïve" judges** (uninformed about psychoanalysis) **evaluating the speech on pleasure/*jouissance*-questions translated from Lacan's seminars**:
Do you feel that the participant
- pleasure: *experiences pleasure; likes what he/she is talking about; savors the present moment ?*
- *jouissance*: *talks lively; talks with intensity; is preoccupied; is excited* ?



Arousal

Participants are judged on the "Self"-Assessment Manikin scales
- by themselves immediately after the Go/NoGo experiment (neuro-cognitive proxy)
- by the naive judges on the recorded speech fragments (psychoanalytic-cognitive proxy)

THE FINAL AIM is to correlate the 3 kind of results in smokers:
•**wanting**: shorter RTs, more errors and delayed P300 in (modified) Go/NoGo paradigms
•more ***jouissance*** clues in speech
•more **arousal** in speech
in order to verify whether, at an **experimental level**, we also find the proposed theoretical parallels.