



ECNP School of Neuropsychopharmacology

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Creativity and mood disorder

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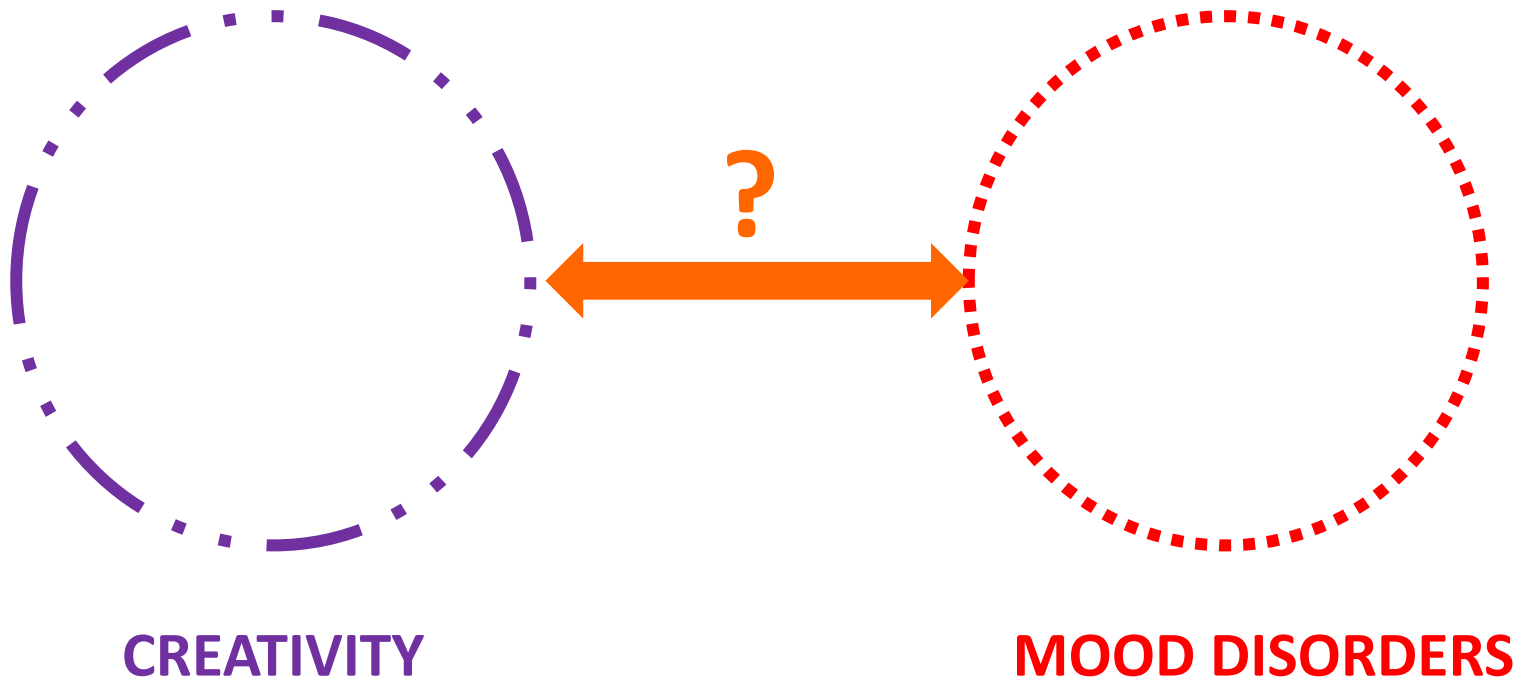
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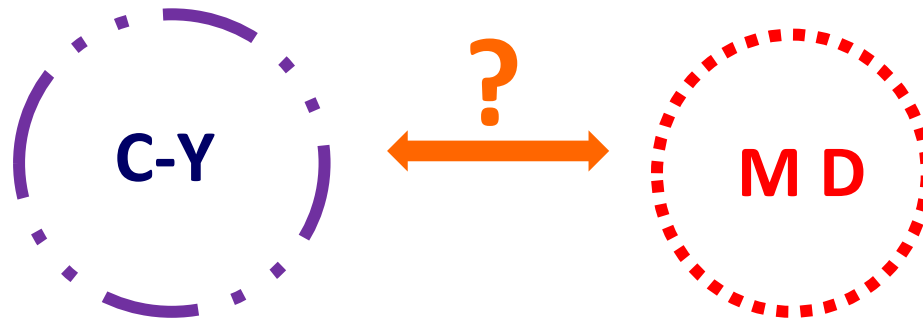


Creativity and mood disorders

Understanding the nature of their potential association

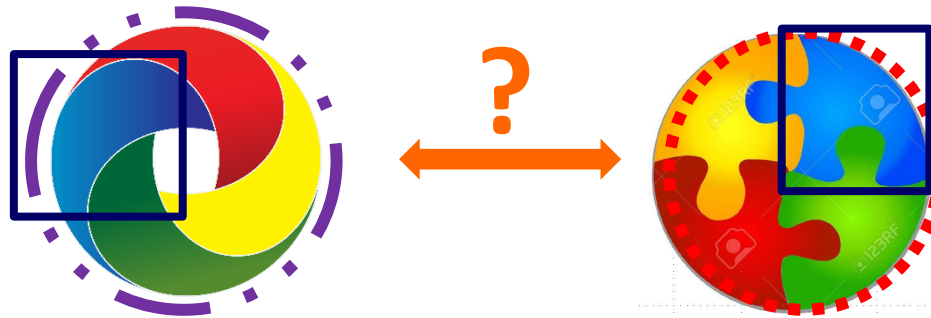


A scientific approach to this question



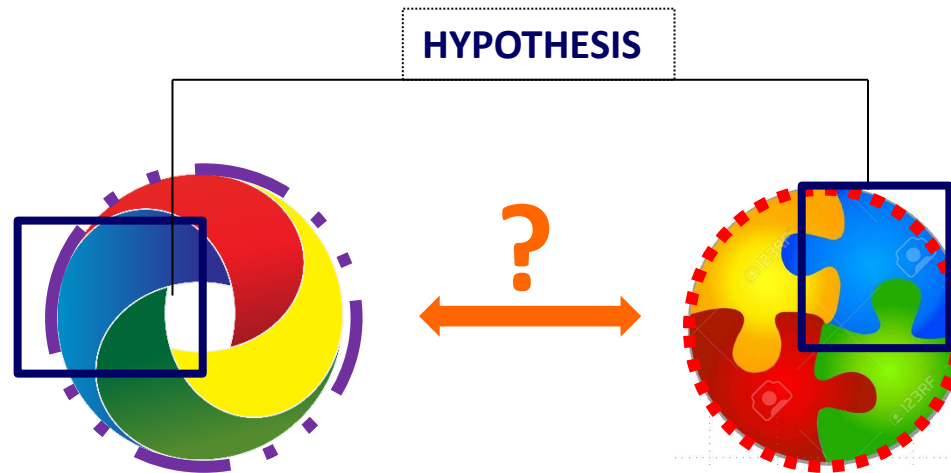
- **Step 1: Is the question meaningful?**
 - Explore the plausibility of the question
 - Look at the epidemiological evidence

A scientific approach to this question



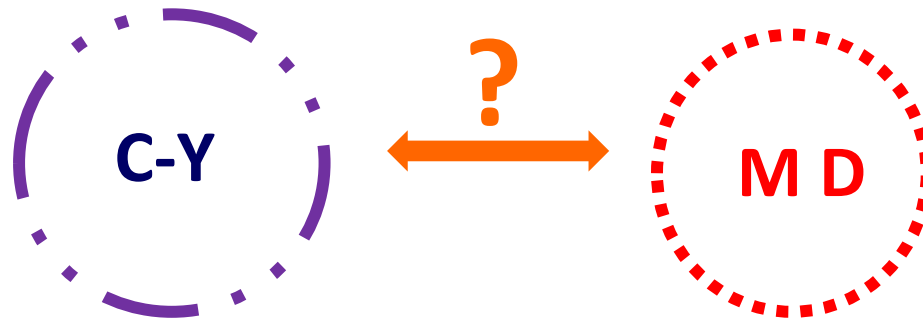
- Step 1: - Identification of a putative meaningful phenomenon
 - Epidemiology
- **Step 2: Explore the heterogeneous nature of each domain**
 - Isolate sub components for which a comparison is relevant

A scientific approach to this question



- Step 1: - Identification of a putative meaningful phenomenon
 - Epidemiology
- Step 2: - Explore the heterogeneous nature of each domain
 - Isolate sub components for which a comparison is relevant
- **Step 3: Make an hypothesis on the explicative link between the identified subdomains**

First approach to the question



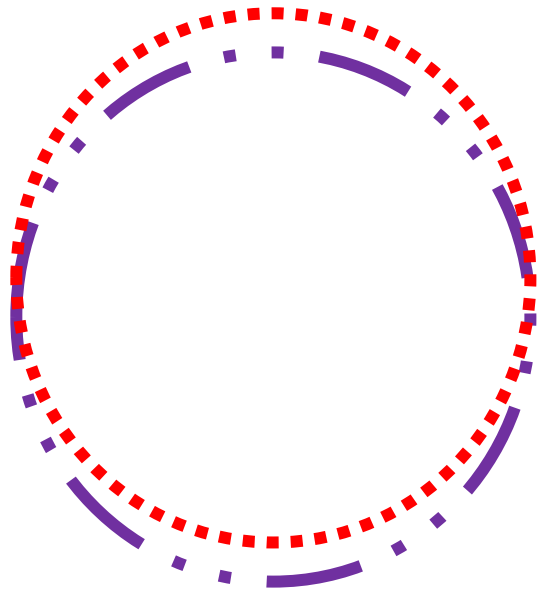
- **Step 1: Identification of a putative meaningful phenomenon**
 - Explore the plausibility of the question
 - Look at the epidemiological evidence

Creativity and Bipolarity

An immediate approach

■ The common approach

- Some strain of madness is observed in every artist
- Some sort of creativity is present in psychiatric patients



BIPOLARITY
CREATIVITY

An OBVIOUS
association

Creativity and Bipolarity

An immediate approach

■ The conceptual approach

MOOD DISORDERS

While

CREATIVITY

Associates with

- Decreased inner freedom (tendency to repeat)
- Decreased cognitive flexibility
- Predictability: similar clinical features of patients with the same disorder
- Decreased social group identification

Associates with

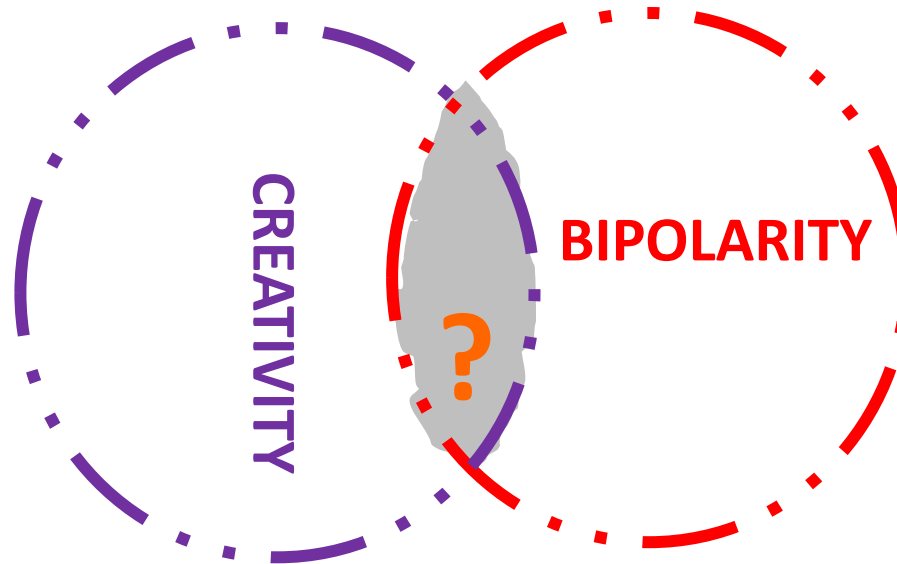
- Inventiveness
- Unpredictability
- High social group identification

**An IMPOSSIBLE
comparison**

Creativity and Bipolarity

Possibly relevant subdomains for comparison

■ In reality



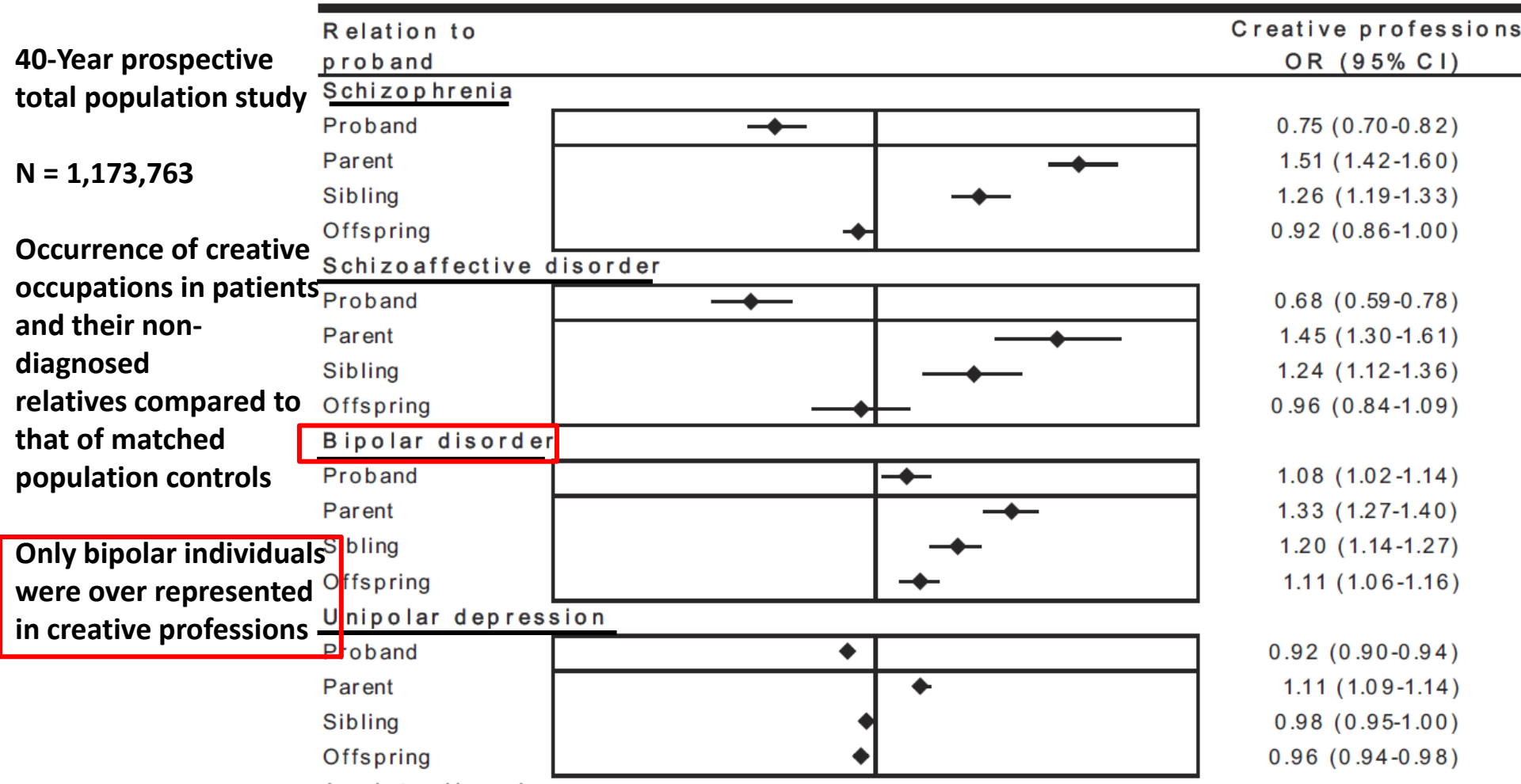
- The observation of artists and patients show a frequent association of creativity and mood disorders

Common components in creativity and mood disorders?

Which components should be isolated ?

Epidemiological evidence

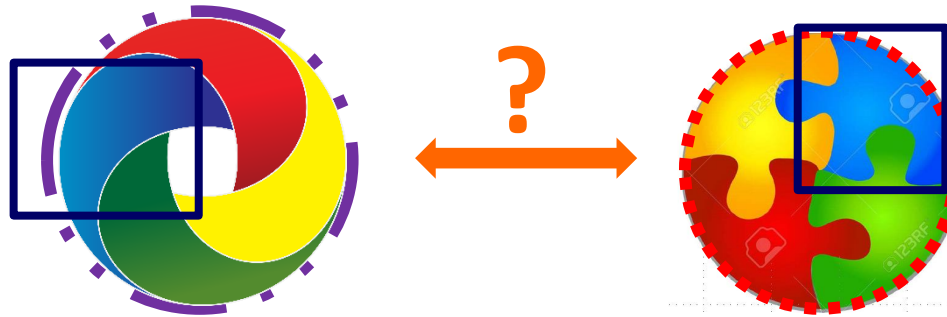
Associations between diagnoses and creative professions



Kyaga S, et al. Mental illness, suicide and creativity: 40-year prospective total population study. *J Psychiatr Res.* 2013 Jan;47(1):83-90.

Creative professions were defined as scientific and artistic occupations

Explore the heterogeneous nature of creativity and bipolarity

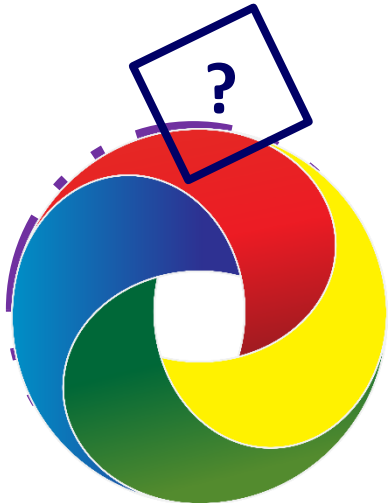


- Step 2: - Explore the heterogeneous nature of each of them
 - Isolate sub components for which a comparison is relevant

Both creativity and bipolar disorder are a mix of different components

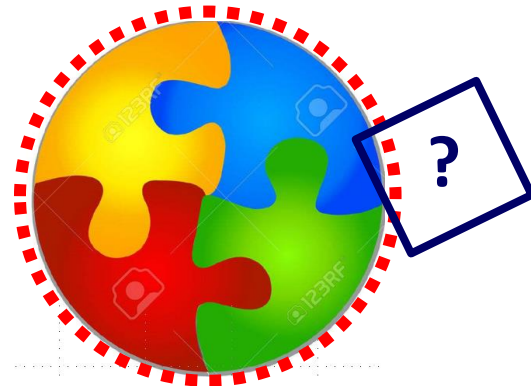
■ Creativity has several components

- What subdomain of creativity is suitable for our analysis?

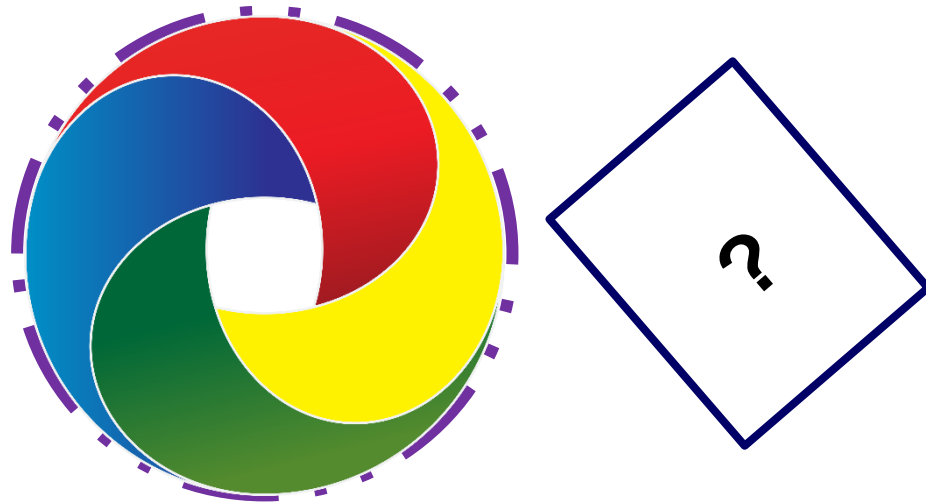


■ Bipolarity can be diversely characterised

- What patterns of the disorder are likely to confer creativity?
- Need to go deeper into bipolar clinical semiology
 - Detailed analysis of the "wealth of signs"



**What SUBDOMAIN OF CREATIVITY is suitable
for our analysis?**



Artistic creation: revelation model

□ The artist as an inspired messenger

- The artist, like the madman, is possessed (or chosen) by a god
- His art does not come from within: he is inspired and a vehicle for a superior creative force
- The resulting work of art has a sacred value to the community

**The artist:
an inspired
mediator**



Nicolas Poussin. L'inspiration du poète, 1629. Le Louvre, Paris



Artistic creation: psychoanalytical model

- ❑ **The work of art as the fruit of the resolution of internal conflicts**
 - Heightened awareness of the artist brought about by an inner crisis
 - Disinhibition of repressed unconscious urges
 - Only the artist can channel this energy into the production of a work of art
 - For the artist, creation is a form of therapy allowing external resolution of internal conflicts –the "sunny side of madness"

**The work of art as
the fruit of resolution
of intrapsychic
conflicts**



Johann Heinrich Füssli. *The nightmare* 1802. Francfort



Creativity: cognitivist model

□ Creativity as a psychosociological process

- Whereby an individual or a group of individuals express their originality
- In how they associate objects, ideas or situations
- To create a product available for others to experience
- Which changes perceptions or use of the product
- By a target audience

Psychopathological dimensions in creative individuals

❑ Novelty generation: SCHIZOTYPIC dimension

- Involves prefrontal tasks
- Association capabilities

❑ Elation: AFFECTIVE (THYMOTYPIC) dimension

- Extremes of mood
- Salience

❑ Uncomfortable with social conventions: AUTISTIC dimension

- Social cognition

SCHIZOTYPIC dimension in painters



Vincent Van Gogh *The starry night*, 1889

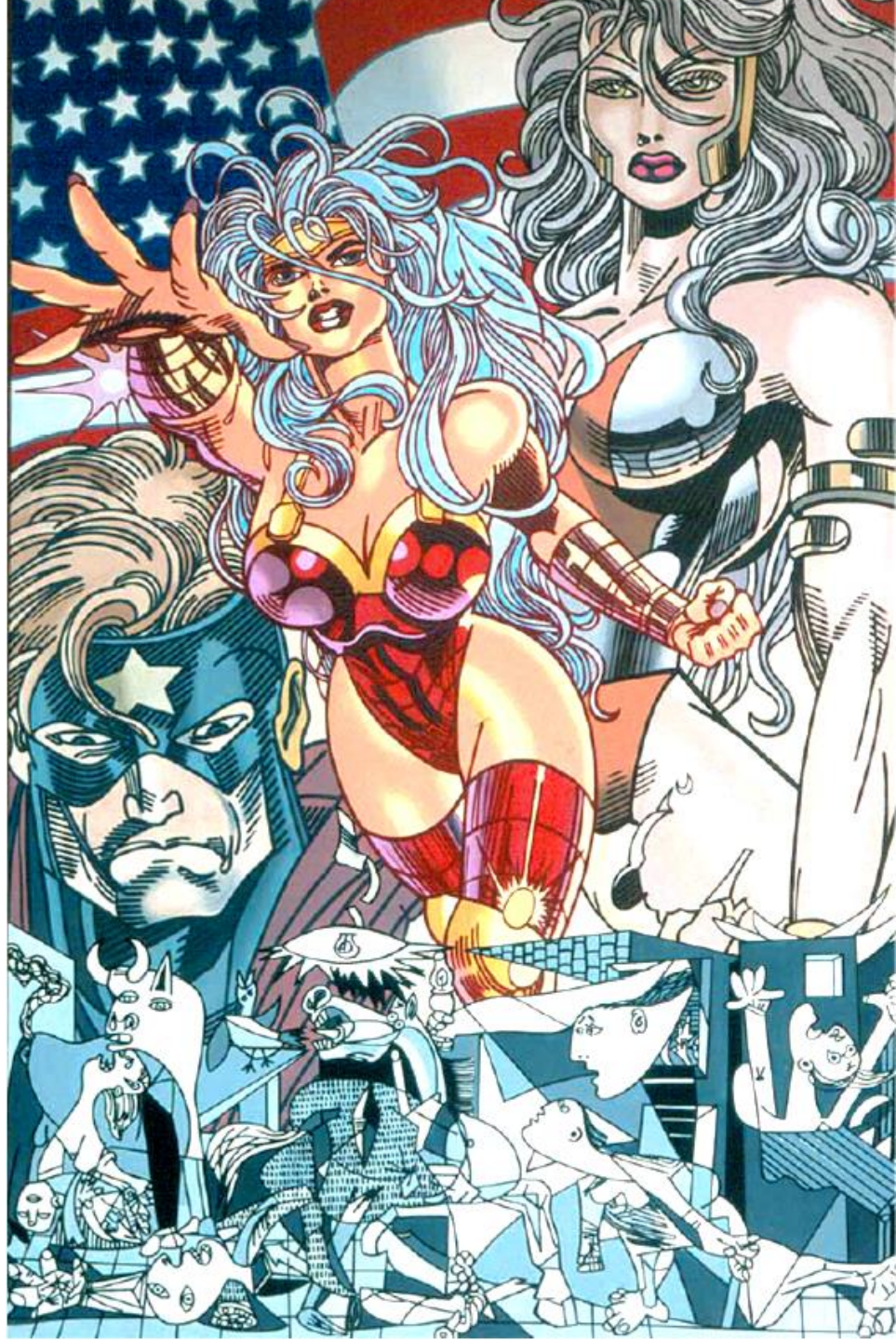


AFFECTIVE (THYMOTYPIC) dimension in painters



Erro

Miss America, 1997



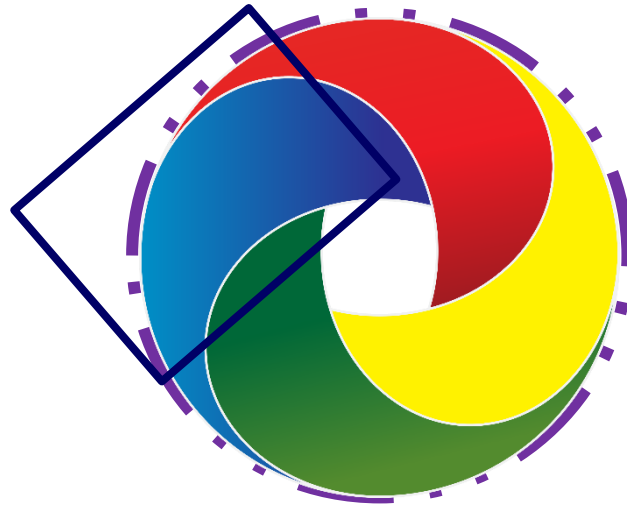
AUTISTIC dimension in painters



Sandro Chia, *The idleness of Sisyphus* 1981



**The neuro cognitive model of creativity is
possibly suitable for our analysis**



What PATTERN OF BIPOLARITY is most appropriate for our analysis?

Focus on clinical semiology

SIGNS in psychiatry have **MULTIPLE**
MEANINGS, some of them can be appropriate
to nurture creativity



WEALTH OF SIGNS

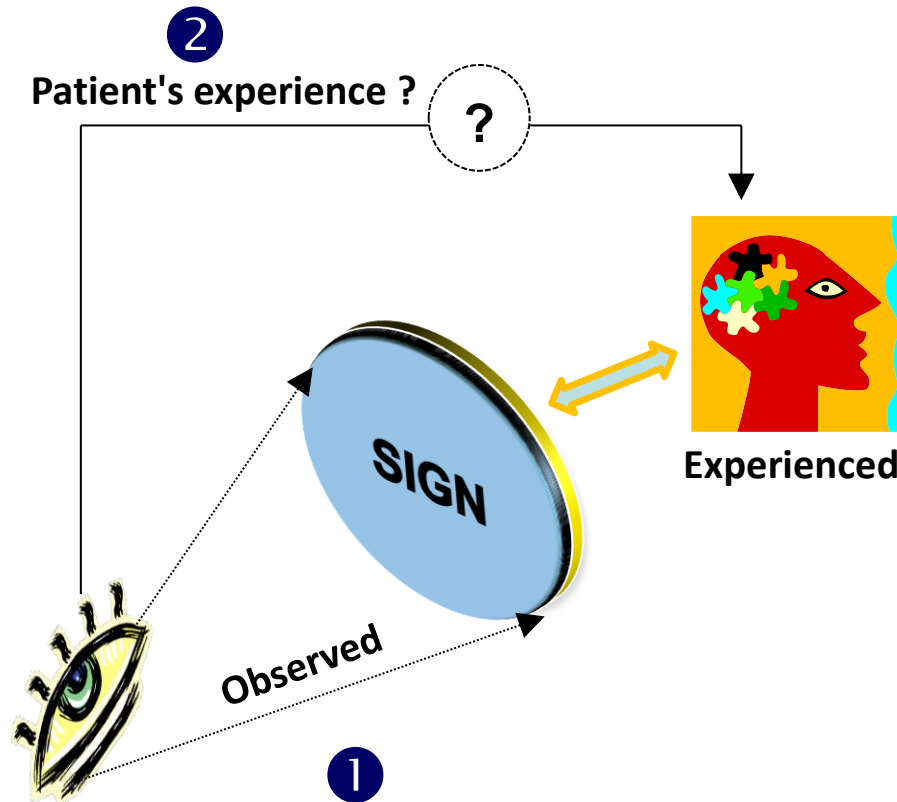
Signs and medical semiology

■ What is a sign in psychiatry?

- Not just a medical symptom
- But also any additional information that comes with it and informs us about the patient's reality (in particular the context where the sign is expressed)
- In psychiatry, the simplest sign is at least dichotomous in meaning (in observing the patient, the observer also interprets the patient's experience)

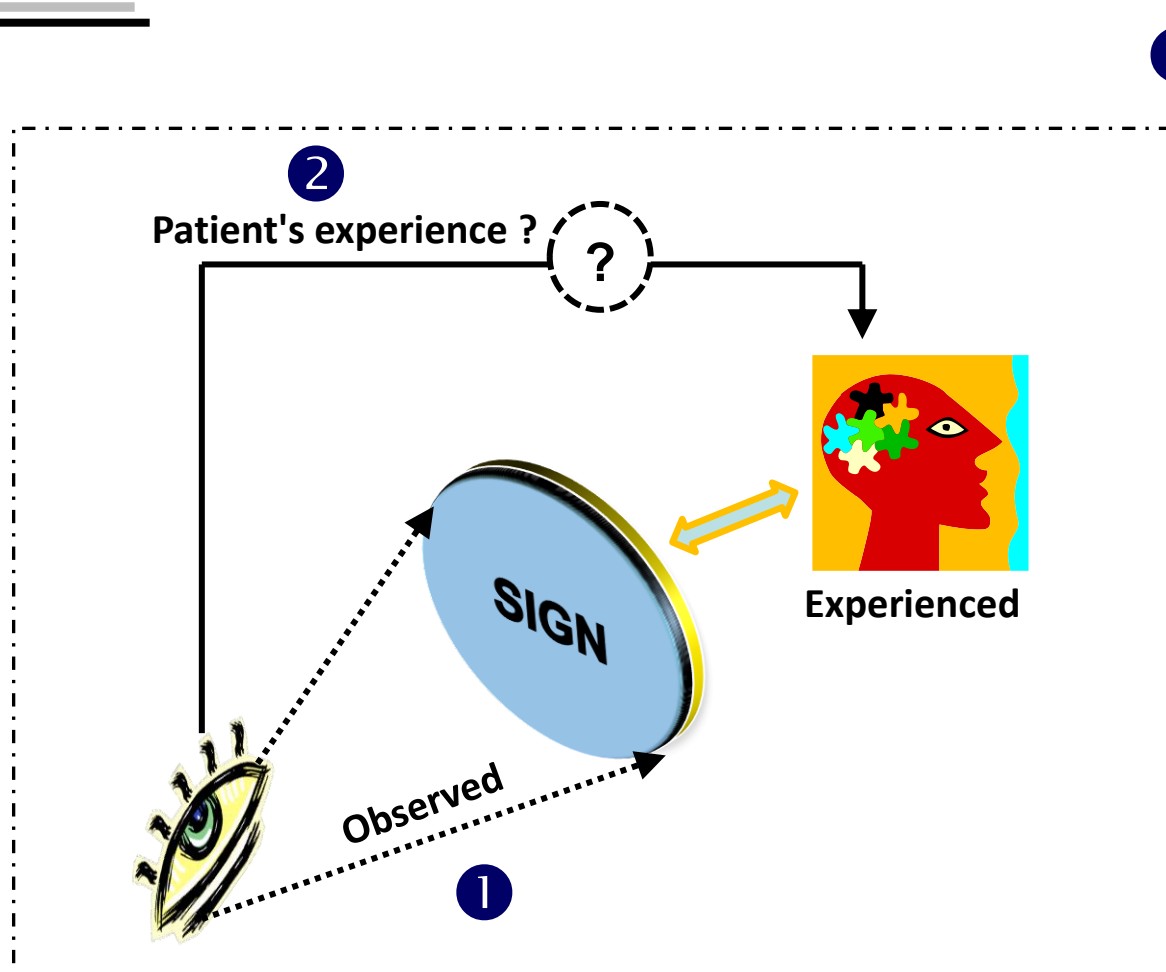
Psychiatric semiology

At least dichotomous in meaning



Psychiatric semiology

At least dichotomous in meaning and to be put into context



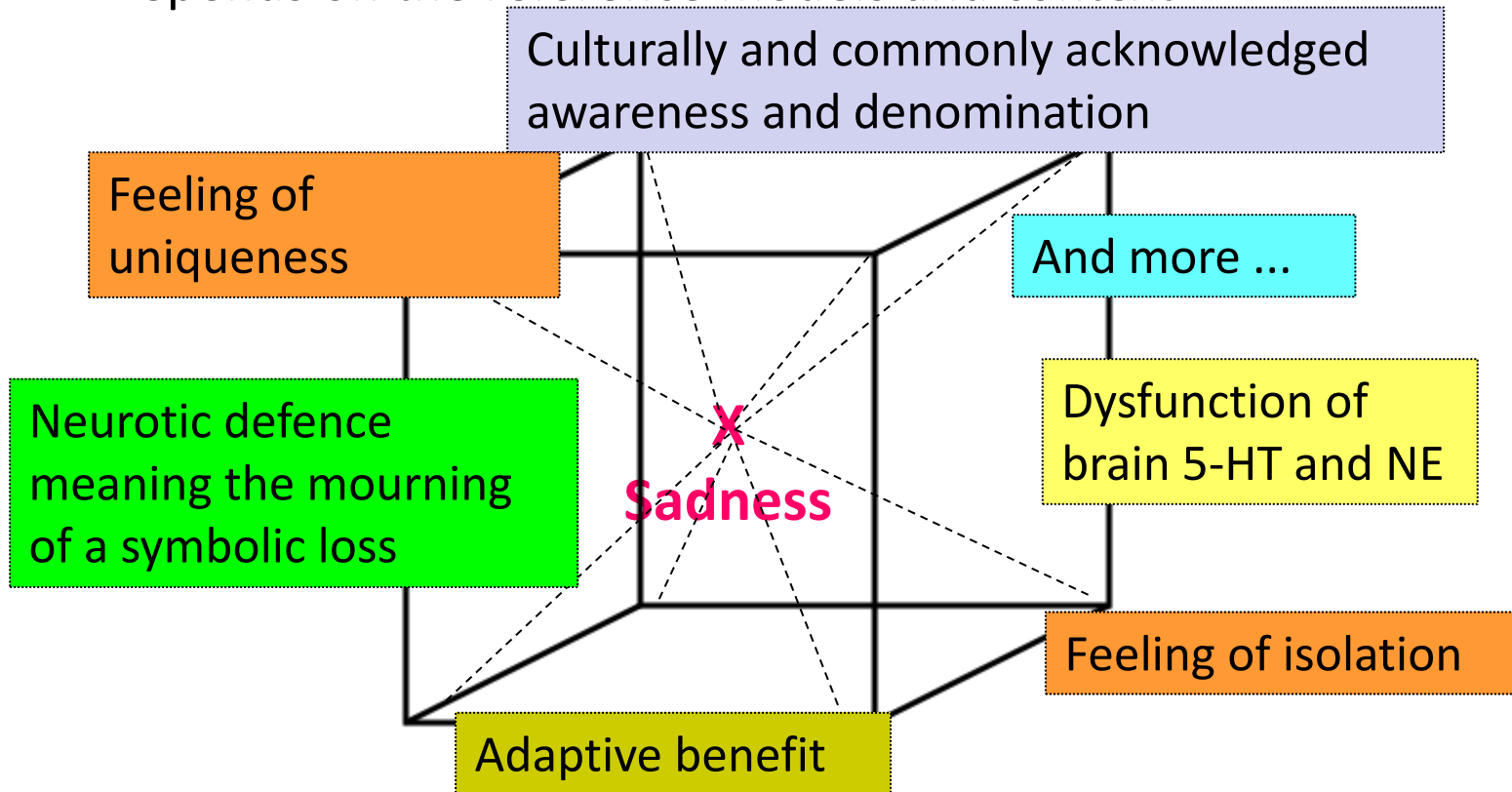
3 Contextualised depending on the purpose of the observation

- Diagnosis
- Classification
- Treatment
- Psychotherapy
- Patient's history
- Culture
- Biological research
- Pharmacology
- Animal model
-
- Creativity
-

An example of the wealth of signs in depression

■ The various meanings of the sign SADNESS

- Depends on the reference models and context



- The “simplest” sign is in reality a crossroad of meanings



**THE WEALTH OF SIGNS IS USED BY
CREATORS TO NUTURE THEIR WORK**

Let us put into practice this conception of the wealth of signs

- Let's give an example of the wealth of signs: for instance, **YELLOW** in the Proust work

The sign "YELLOW" in Proust: "*À la recherche*"

■ The "YELLOW" evoked by Proust's words

- *"For the first time, he noticed some small figures in blue and that the sand was pink, and, finally, the precious substance of the tiny patch of yellow wall. His dizziness increased; he fixed his gaze, like a child upon a yellow butterfly that he wants to catch, on the precious little patch of wall. "That's how I ought to have written," he said. "My last books are too dry, I ought to have gone over them with a few layers of colour, made my language precious in itself, like this little patch of yellow wall."*

The making of the "YELLOW" of Proust's description

- **As many "YELLOWS" as there are readers**
- **The making of the YELLOW evoked by Proust's words**
 - The internal subjective representation of "yellow" is built from each reader's past experience of all the yellows seen in his life
 - Interestingly, Proust is using this colour example as a metaphor of an ideal of writing, emphasizing the echoing effect of sensation in the human mind

What "YELLOW" do you see when looking at Vermeer's painting?

- The observed YELLOW is a combination of the immediate experience of the colour and the level of awareness of context

The precious substance of the tiny patch of YELLOW wall



"... some small figures in blue and that the sand was pink"

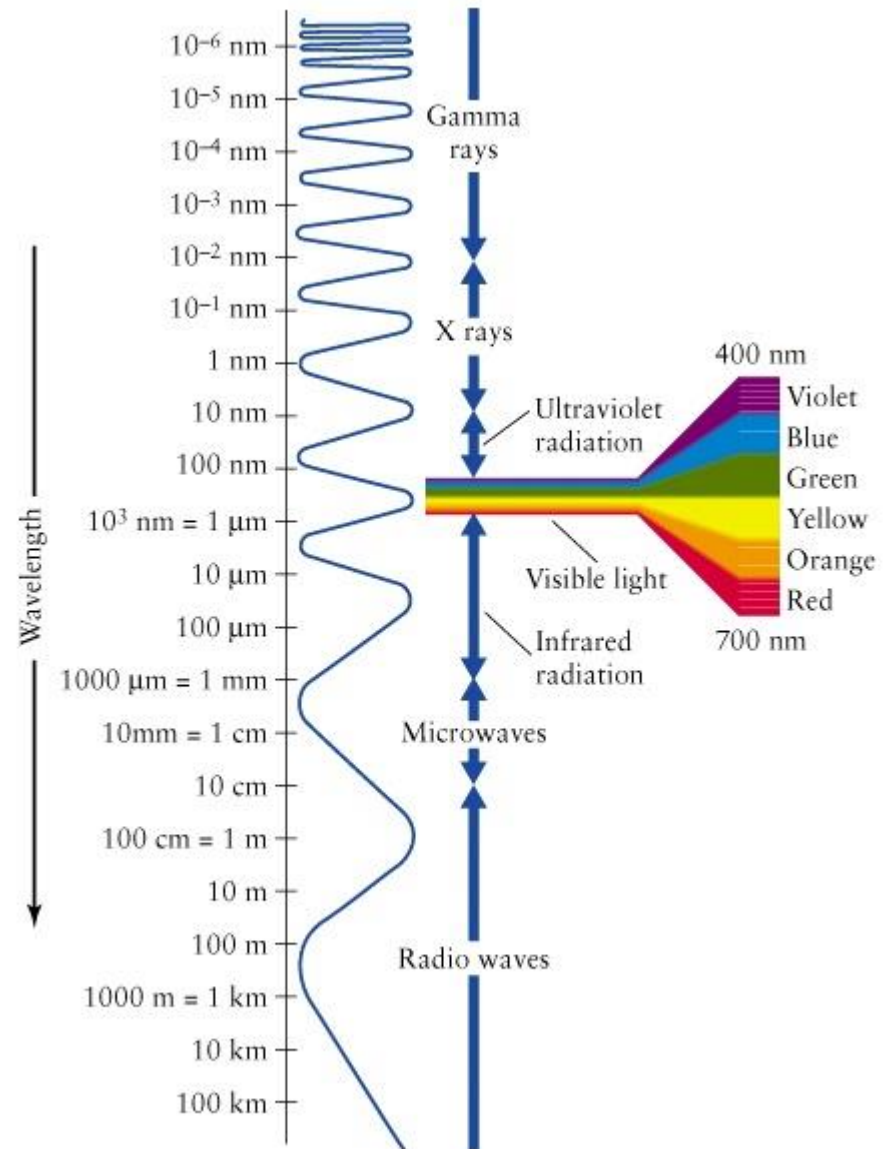
Confronting Proust's and Vermeer's "YELLOWS"

- The imagined YELLOW after reading Proust is still alive after seeing Vermeer's painting but also modified

But "YELLOW" is also a physical reality

■ The “scientific” yellow

- Which is in fact a combination of pigments that absorbed any colour except from the yellow wavelengths



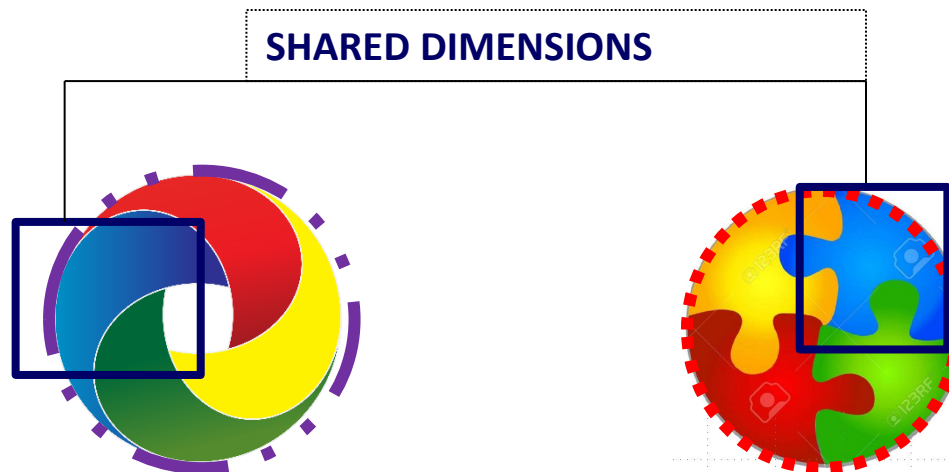
Semiology of the sign "YELLOW" of Vermeer's painting

- **No overlap of each of the identified webs of signs**
 - Which pre-supposes a complete and integrative knowledge of each level of understanding
- **The choice of a particular model depends on the purpose of the observer**
 - You cannot restore the yellow patch of the painting using your appraisal of "yellow" from Proust
- **Purpose and context can drastically modify the analysis of signs**

To sum up

- Among the several models of creativity, the cognitivist models is preferred
- Signs, and in particular medical symptoms are integrated webs of information open to several different interpretations
 - In bipolar patients, some facets of the clinical manifestations can participate in the creative process
- Hypothesis: creativity and bipolar psychopathology share a common vulnerability?
 - The outcome of salience

NATURE OF THE SHARED DIMENSIONS BETWEEN BIPOLARITY AND CREATIVITY



Shared biological dimensions in some bipolar patients and creators

- **Hypothesis: in creators, some biological determinants conferring risk of bipolarity allow creative predispositions**
 - In creative periods, the vulnerability factors are harnessed by protective factors
- **The shared vulnerability comprises:**
 - Cognitive disinhibition which allows more stimuli into conscious awareness
 - An attentional style driven by novelty salience
 - Neural hyperconnectivity that may increase associations among disparate stimuli

Protective factors in some creators with bipolar vulnerability

- **Creativity and bipolar psychopathology share some common traits**
 - Tendency for "thinking outside the box"
 - Flights of ideas, speeding up of thoughts
 - Heightened perception of visual, auditory, somatic, and spatial stimuli
- **Protective role of superior meta-cognitive factors**
 - High IQ
 - Increased working memory capacity
 - Enhanced cognitive flexibility, to enlarge the range and depth of stimuli available in conscious awareness to be manipulated and combined to form novel and original ideas

Cognitive salience: a shared biological dimension in bipolar patients and some creators?

- **Hypothesis: an increased dopamine functioning is involved in both creators and bipolar patients**
 - But their use of the dopamine-induced salience of stimuli differs
- **Salience: attribution of an affective and hierarchical value to a percept (sign)**
 - Salience allows the necessary hierarchy to organise effectively the information needed to achieve creation
 - In the creative process, salience gives a coherent association of the numerous and heterogeneous signs present at the same time

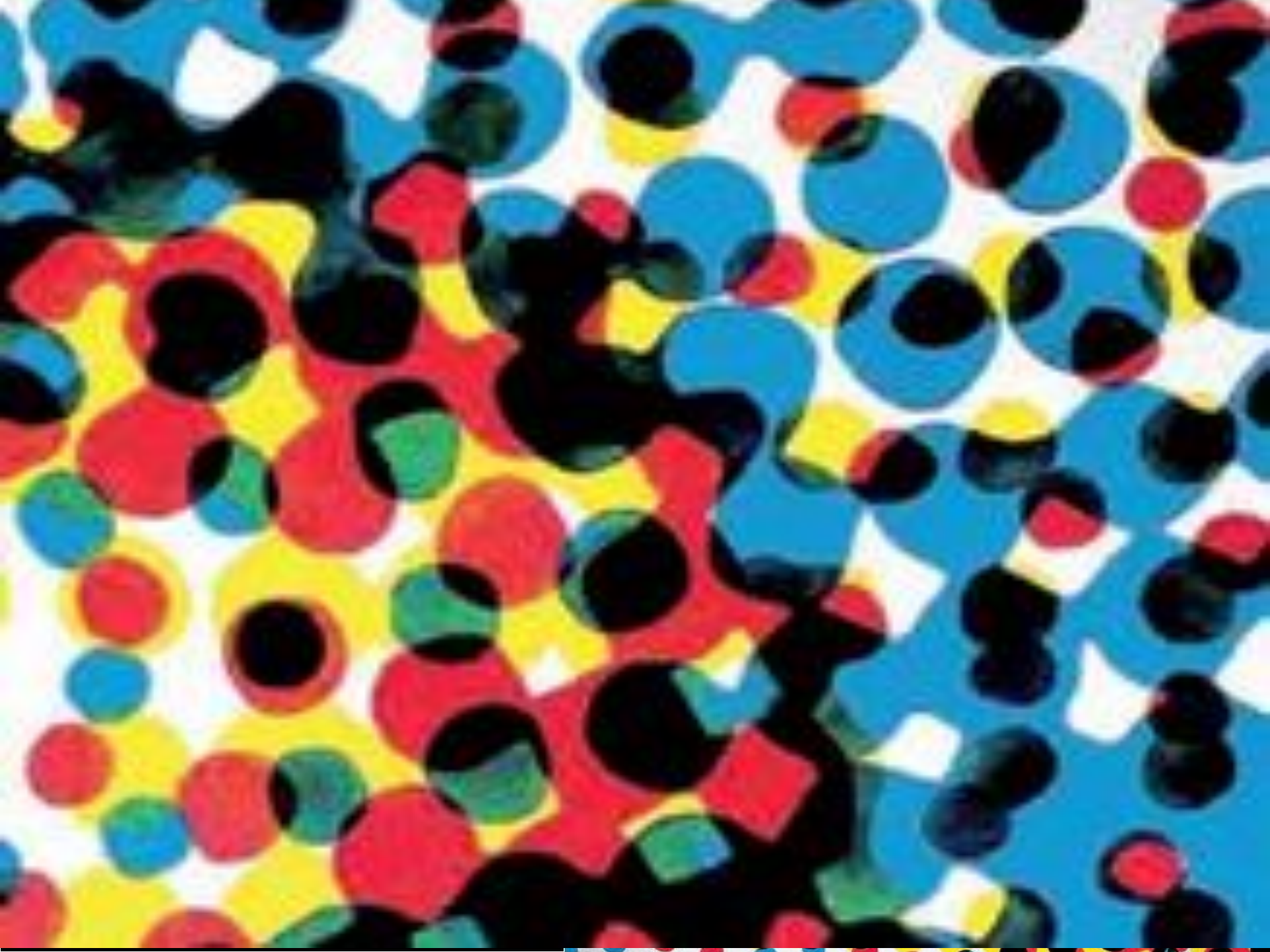
Salience: a possibly shared biological process between some bipolar patients and creators

- **The different outcomes of salience**
 - In artists, this process is
 - Controlled and self-limiting
 - Leads to an individualised network of ideas
 - In bipolar patients, this attribution is
 - Uncontrolled and self-perpetuating



Alain ~~Édouard~~ Manet

Le déjeuner sur l'herbe, 1865



Conclusion

- **Creativity and madness are most often incompatible**
 - Because madness leads to repetition and decreased invention
- **BUT**
 - For some forms of creativity
 - And in bipolar individuals with high protective factors
 - An association is observed, at least during the first decades of the disorder
- **The wealth of signs is critical to understand the complexity of the human experience, in particular in patients**
 - It guides the observation and the therapeutic process
- **Works of art help understanding of the multi semantic value of signs, in particular émotions**

SOMES EXAMPLES OF THE USE OF THE WEALTH OF SIGNS BY ARTISTS

Artists do not paraphrase the clinical signs, they transform them, often paradoxically

- **A manic watch**
- **A fragile emphasis**
- **The distorted structuration of Munch's "The scream"**
- **The immobility of the fall**

LA CRAVATE ET LA MONTRE

LA CRAVATE
DOU
LOU
REUSE
QUE TU
PORTES
ET QUI T
ORNE O CI
VILISÉ
OTE- TU VEUX
LA BIEN
SI RESPI
RER

COMME L'ON
S'AMUSE
BI
EN

les heures la
et le vers dantesque luisant et cadavérique
le bel inconnu
les Muses aux portes de ton corps
l'infini redressé par un fou de philosophe

Mon cœur té de la les yeux vie pas se l'enfant la dou leur de mou rir

semaine la main
Tircis

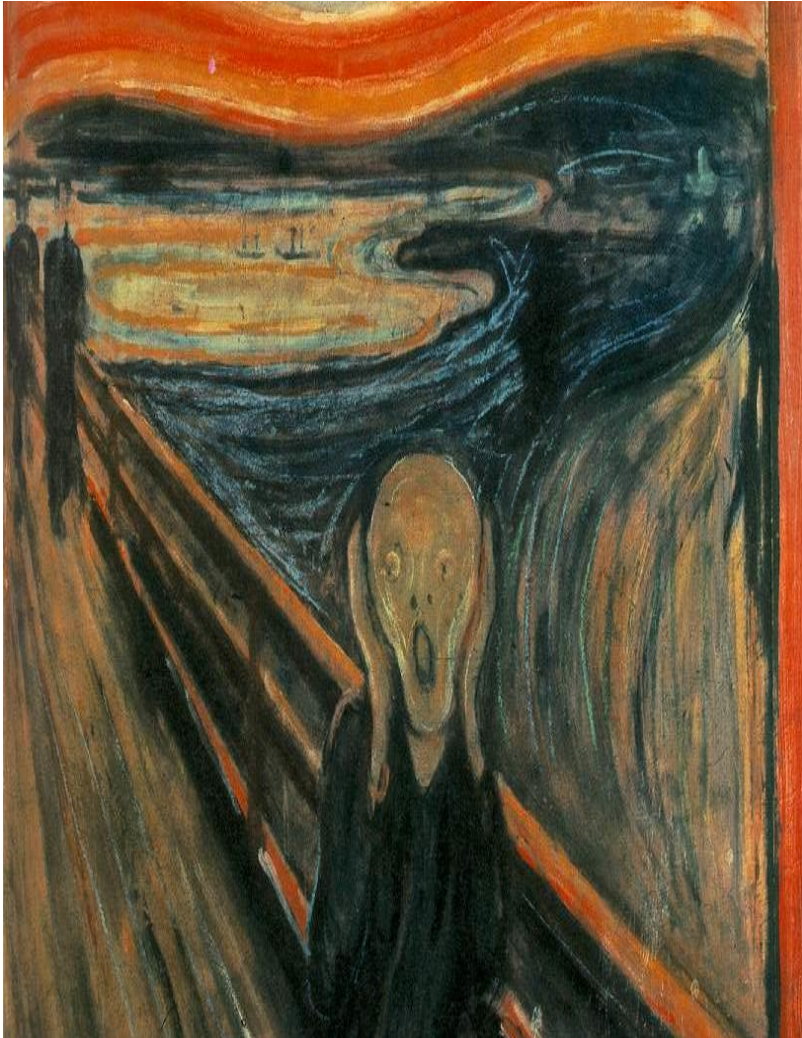
Apollinaire

La cravate et la montre, 1918



Botero
Ballerina, 2001

"Anxiety" in painting: the dramatization of contrasts

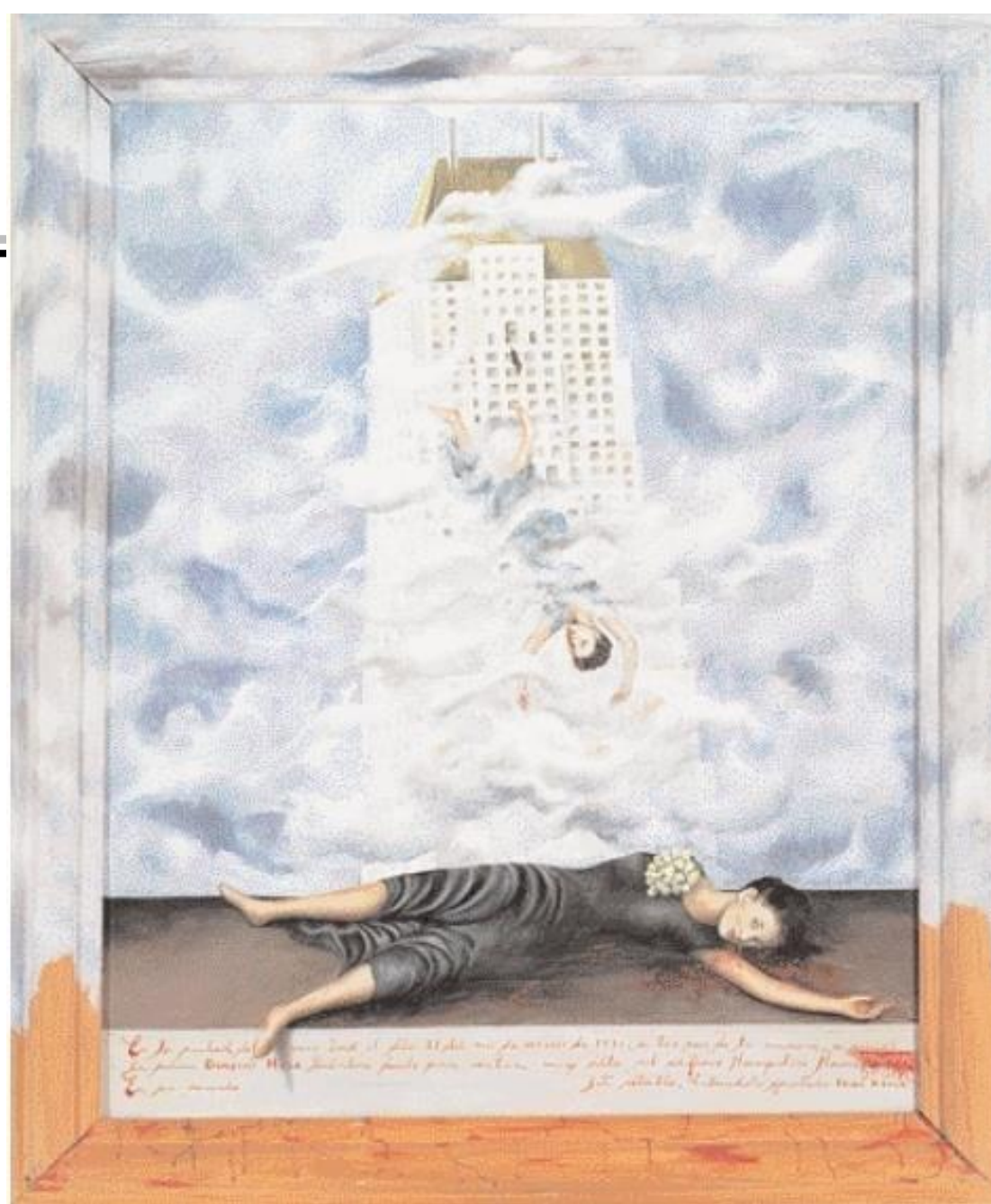


- A central but isolated agonised figure
- Division of the space in 2 opposite and unreachable worlds
- Depiction of the modification of reality: curved horizon, bloody sky
- Similarity between the face expression and depiction of the void space under the bridge
- Vanishing point focuses on unreachable figures
- Even though facing the spectator and being central, the character is isolated, blocked between the frame and the hand rail

The scream, 1910, E. Munch

The wealth of the symptom "suicidality"

- The frame does not contain. It is part of the painting
- The whole scenario is depicted blurring space and time boundaries
- We conceive in a unique appraisal the lady's preconception, impulsivity, feeling of falling and her unanimated body
- The broken doll's left foot outside the painting is pointing out the derision of words in these circumstances



Frida Kahlo The suicide of Dorothy Hale, 1939