

Emotional Finance – What Drives Investors?



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Excellence in
Management
Education

- The financial crisis has changed the landscape: budget deficits and new regulation
- Regulation in (derivatives) markets focuses on
 - Increase in regulatory capital
 - Restriction of trading business
 - Ban on short sales
 - Ban on derivatives
 - Clearing and registration of OTC derivatives
- **But:** This regulation will not prevent a next crisis because it cures the symptoms - not the reasons!

Focus of this presentation:

- What is the role of emotions in financial decision-making?
- What is the implication for financial regulation?

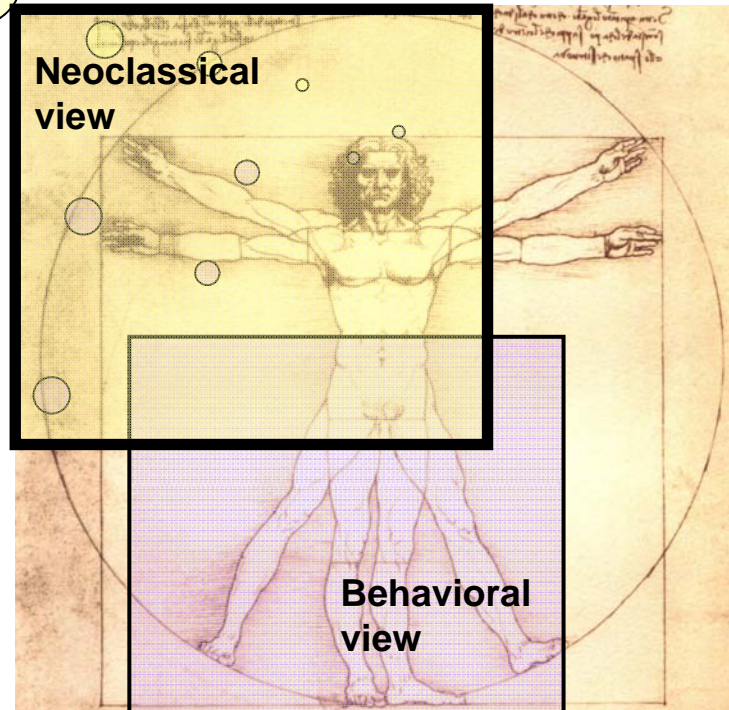
- I. Regulation as the consequence of the crisis
- II. Affects, Emotions and Rationality**
- III. Affects/Emotions in Financial Decision Making
- IV. What Makes the Capital Market Special?
- V. Summary and Outlook

Current Paradigm: Neoclassical and Behavioral Finance

Rational analysis

Heuristics

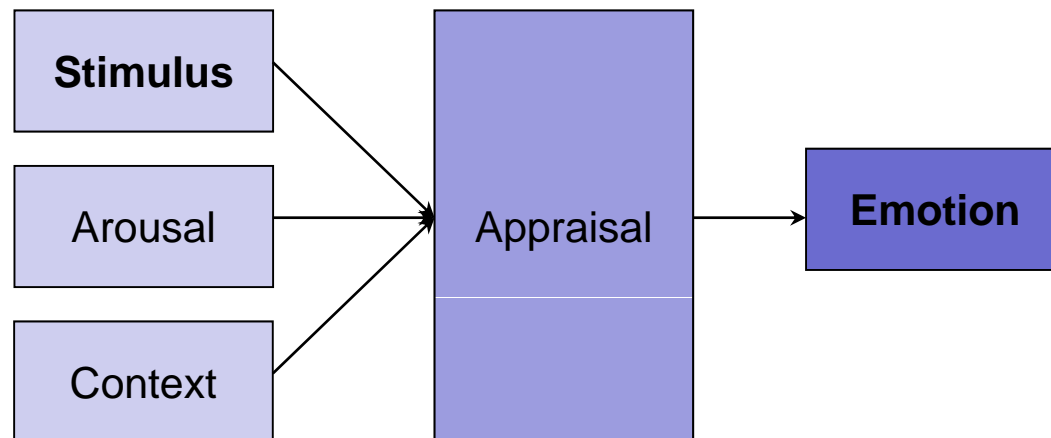
Cognitive limitations



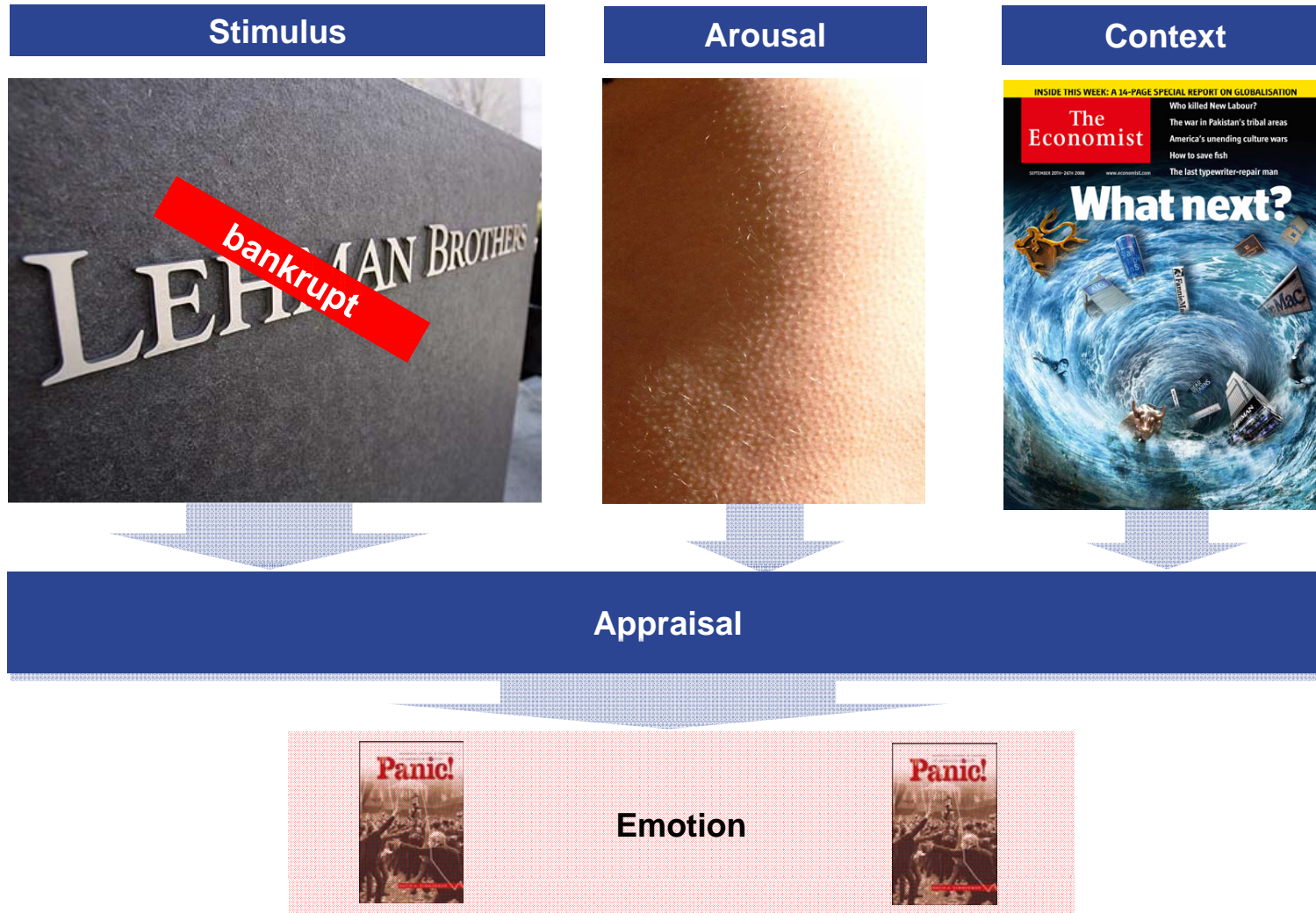
Bubbles are caused by a joint devaluation of assets' prospects or herding!

Emotions ...

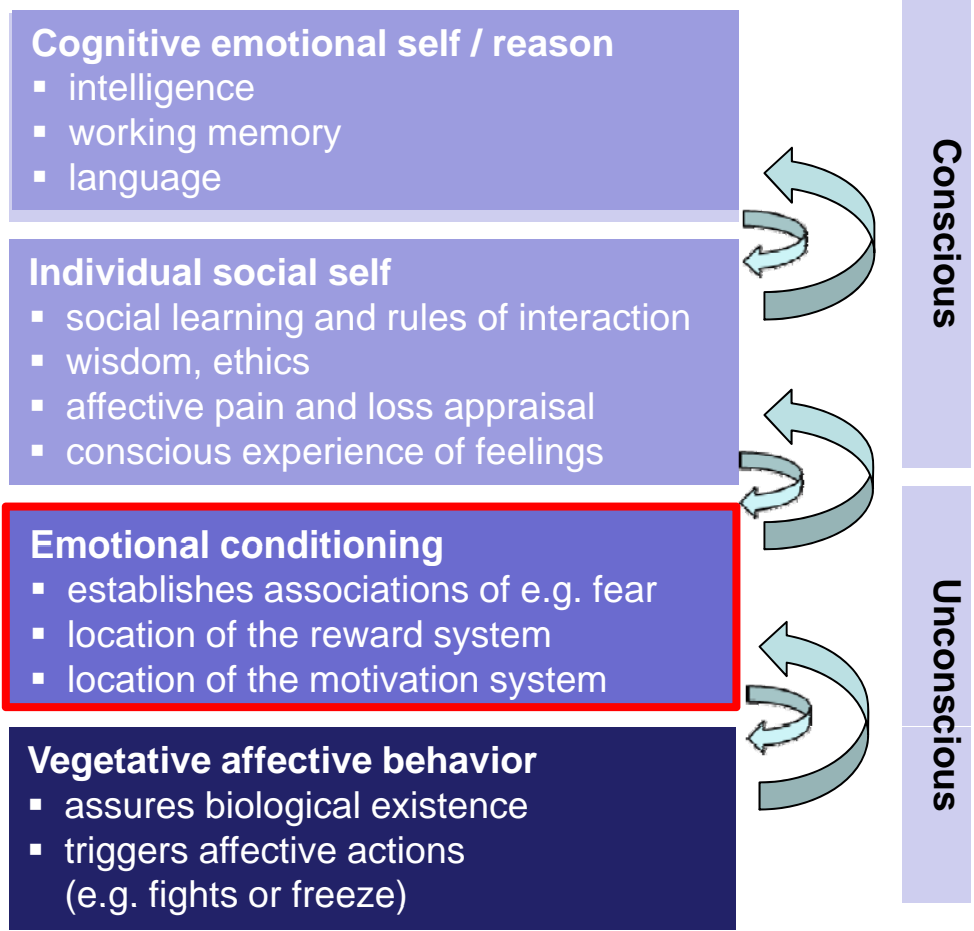
- ...are psycho-physiological processes,
- ...are consciously or unconsciously experienced and interpreted,
- ...are caused by people, objects or situations,
- ...come along with physiological reactions, specific cognitions and subjective feelings
- ...lead to action tendencies.



Example for the Emergence of Emotions: Panic on Sep. 15th, 2008



Simplified hierarchical model of the human personality



Emotions ...

- ...are part of the unconscious sections of the human brain
- ...can “override” higher conscious functions
- ...are the “working language” of the human brain

Reason ...

- ...is the function with the largest distance from emotionality
- ...has no direct connection to emotional centers
- ...can exist without wisdom

Trading ...

- ...directly touches the emotional centers of the brain

Early Childhood Experiences determine Emotional Conditioning

- Emotional conditioning results from experiences during the first years of life (0-3 years)
- „Programming“ of the subconscious mind

- associations
- imitations
- experiences
- etc.



Understanding
and change



Dispositions and
patterns

- Emotional patterns of adults are the consequence of this „programming“
- Later influences require „Admin-Rights“, meaning a deeper understanding of the self

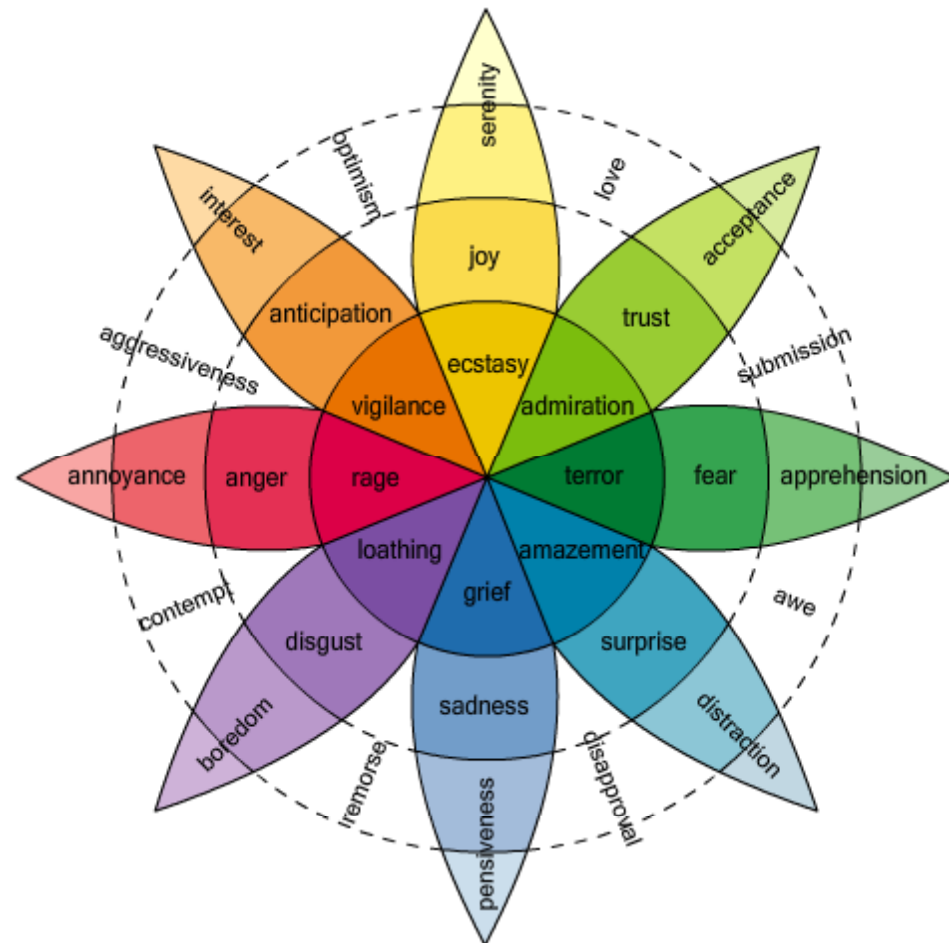


- relationships
- conflicts
- self-esteem
- etc.

Categorical Definition of Emotions: Plutchik's Wheel of Emotions

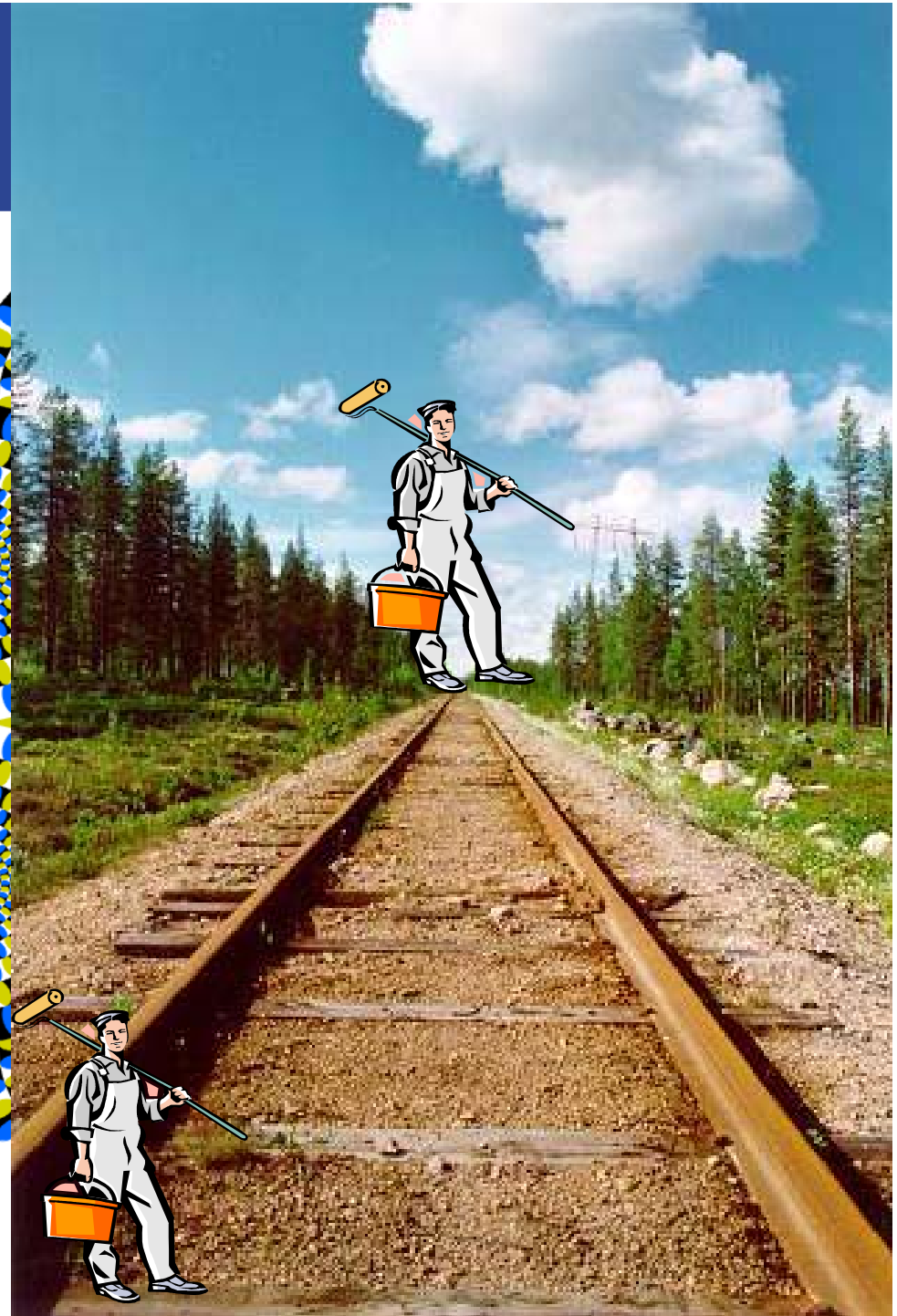
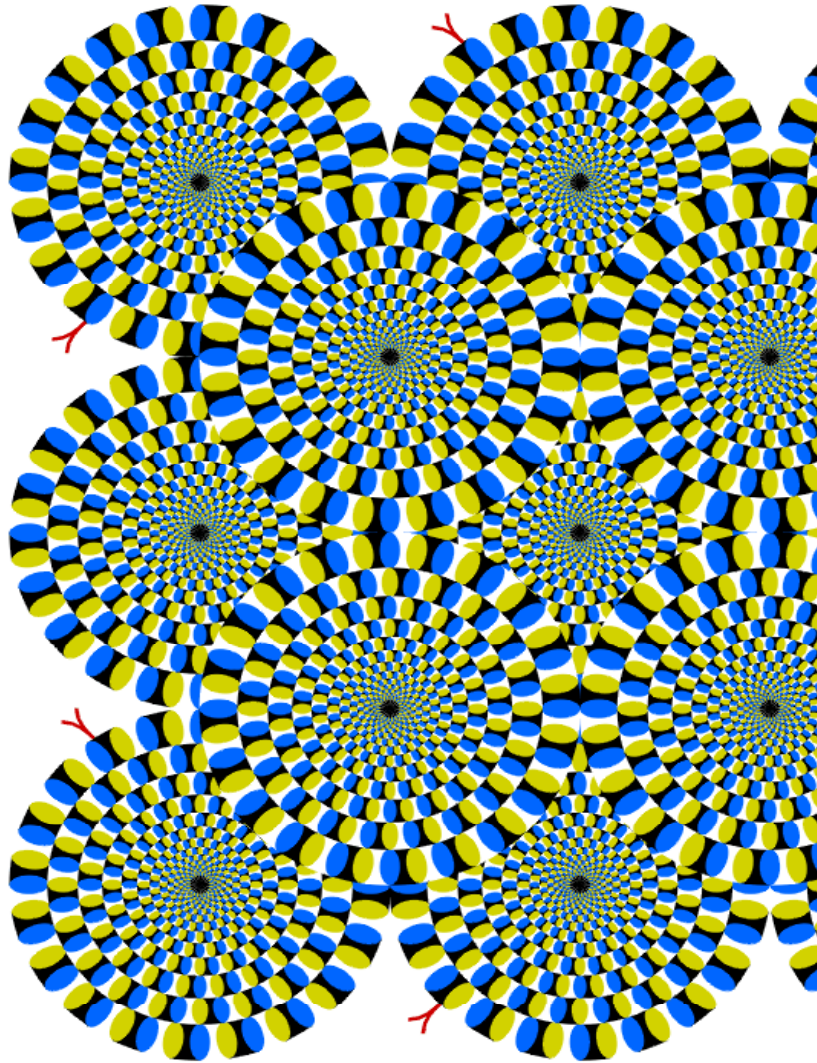
Base Emotions...

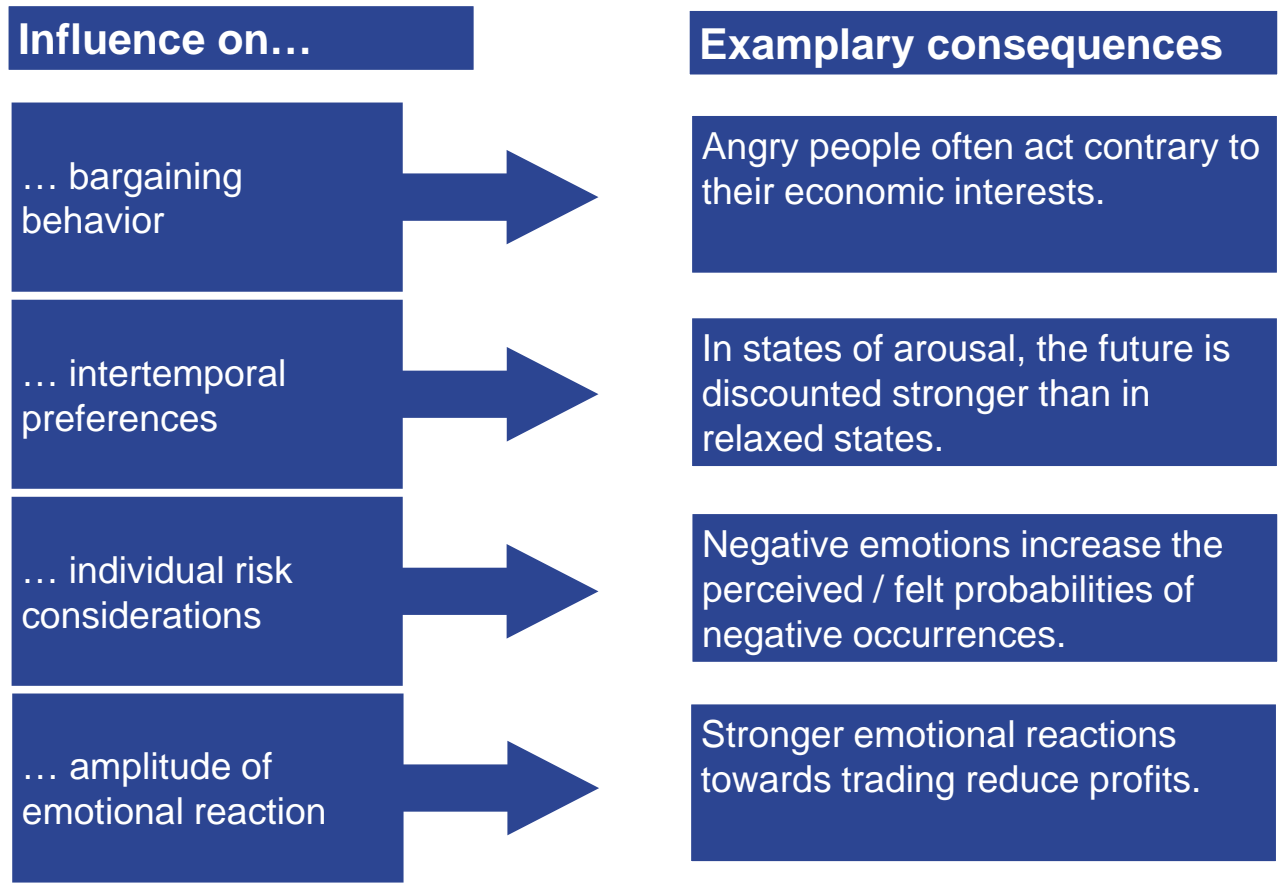
- Common to humans and many animals
- Shared by all people on earth
- 8 base emotions organized in 4 base pairs
 - i. Anticipation vs. Surprise
 - ii. Joy vs. Sadness
 - iii. Trust vs. Disgust
 - iv. Fear vs. Anger
- Many higher emotions as combination of the above



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Human Perception





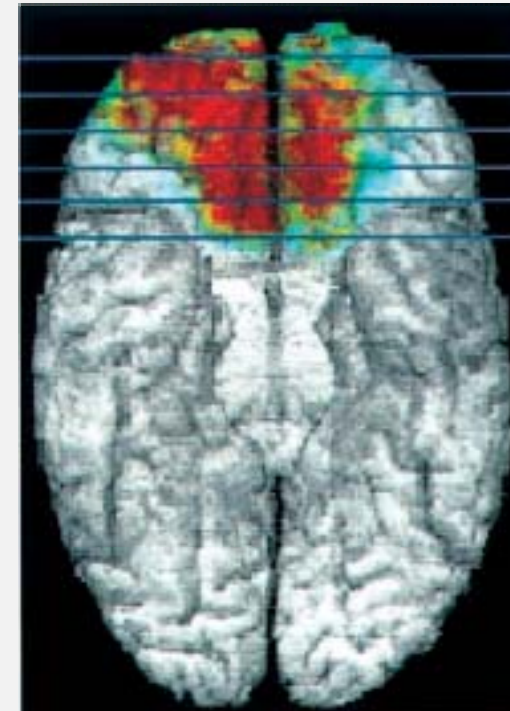
Being without Emotions – the worst Decision-Maker of all?

Accident of a railway worker

- An accidental explosion destroyed the worker's prefrontal cortex. All other brain sections remained intact.
- After the accident, he recovered well – but did not have any emotions anymore.

Changes in decision making

- The patient described his decision as „without emotion“.
- But: In many situations he was no longer able to come to a decision at all, even though all relevant information was processed – without emotions he was caught like „Buridan's Donkey“



Emotions are no handicap but play a key role in decision making!

Jean Buridan's Donkey

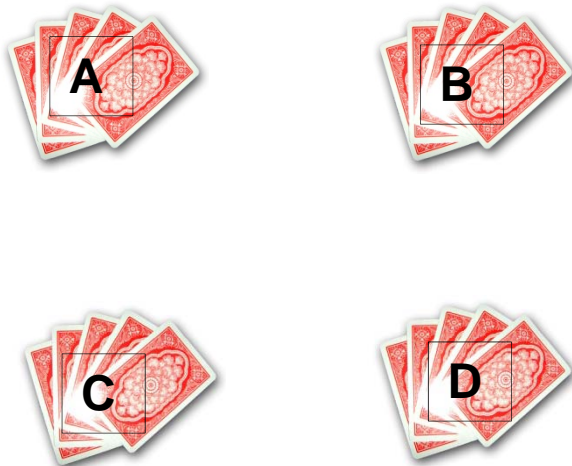


How does a rational donkey decide?

Antonio Damasio: Sentio, ergo sum

- Emotional experiences are stored in the prefrontal cortex
- Damasio's theory: the brain uses somatic markers to transfer past emotional experiences to imminent decisions.
- These somatic markers support decision making by assigning feelings to specific outcomes or even by eliminating emotionally unbearable choices at all.

Damasio's Experiment: Somatic Markers

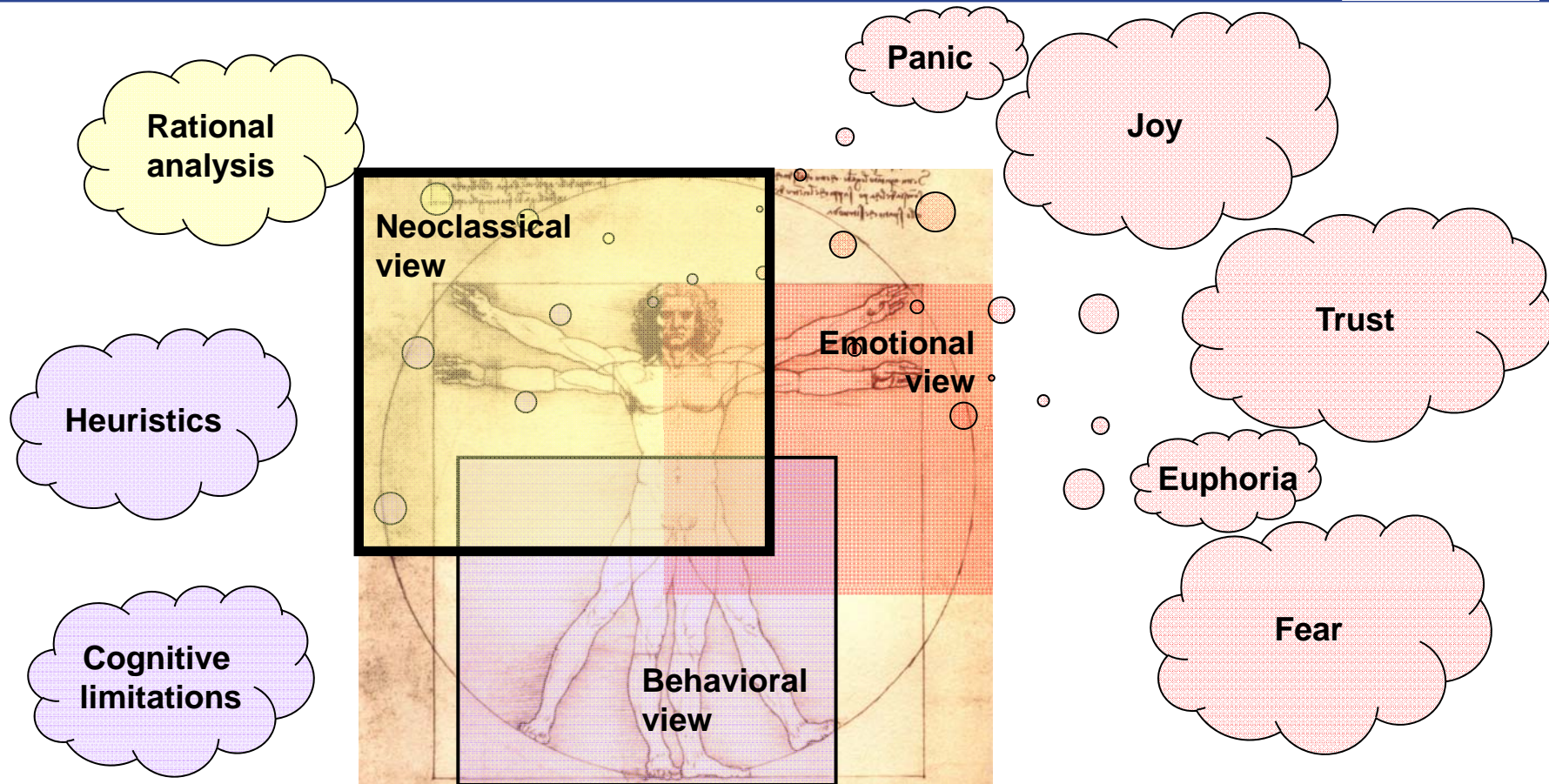


- Piles A and B initially lead to large gains followed by disproportionate larger losses.
 - Piles C and D have a moderate payoff profile.
 - Healthy participants avoid piles A and B after experiencing the first losses.
 - Participants with damage of the prefrontal cortex stick to the piles A and B, even though they also experienced the disproportionate large losses.
- **Emotional conditioning is indispensable in human behavior. Without it, there is no adaption of behavior towards danger or risk.**

Trading without Emotions – Desirable?

	No Emotions	Appraisal
Money	Without emotions, the brain assigns no value to money, thus no intrinsic desire to earn it.	Inconclusive
Preferences	Without emotions, no intrinsic preferences prevail.	Usually leads to problems in interactions with other people in groups
Risk	Without emotions, no adjustment of behavior when risk-return relationship changes.	Depends on the correlation between risk and returns

Scientific findings are inconclusive, but absence of emotions is definitely a reduction in life quality.



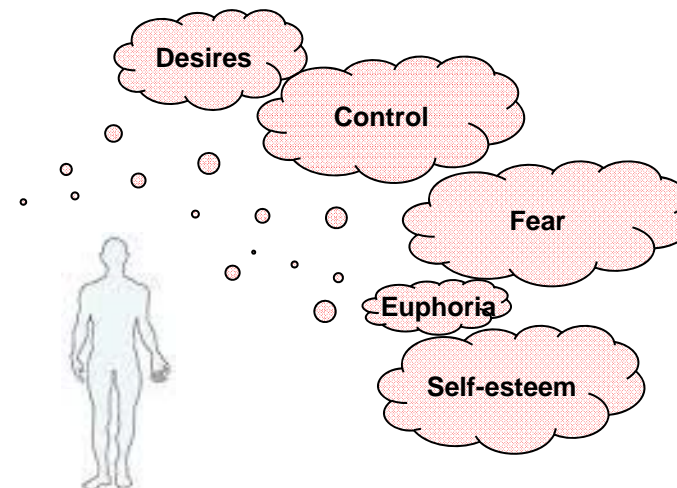
No single view is sufficient – the power lies in their combination.

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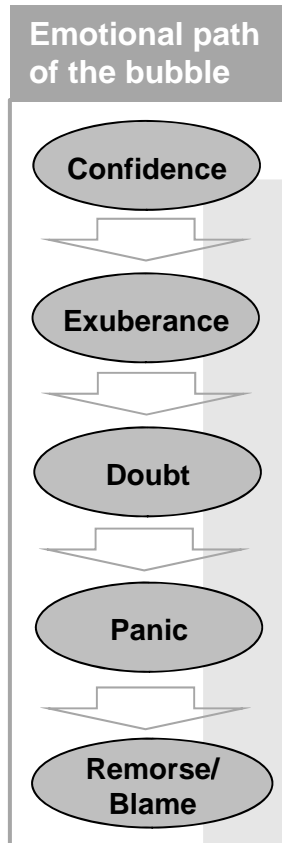
Do certain Emotions in Capital Markets Prevail?

Group of professional traders differs from the general population average

- Generally younger, high proportion of male traders, high risk propensity
- Lower number of children (corrected by age)
- Experienced crisis in life (shock, divorce, non-sheltered childhood)
- No differences in the amount of relationships
- Think that auctions are the fairest mechanism to allocate resources
- Fairness perception tends towards rational choice predictions



Interactions between Emotions and Capital Markets



- **Question: Which emotional dynamics exist in capital markets?**

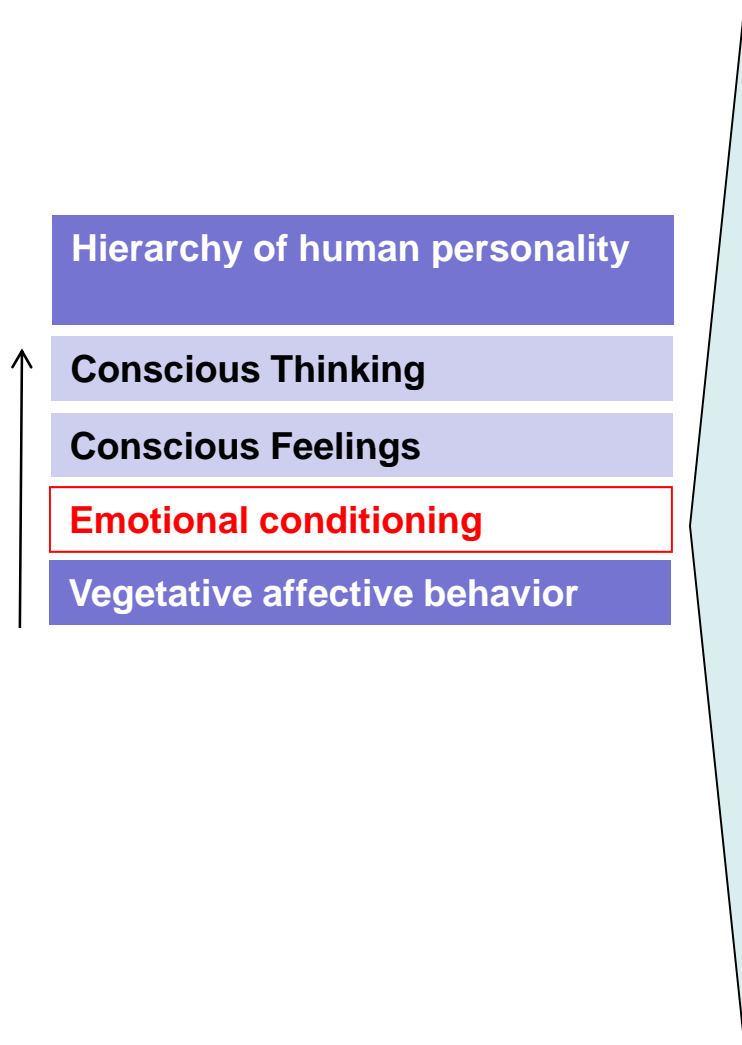
- **Which emotional desires do participants have?**

- Is it a group with homogenous desires and abilities?

- Are there differences to other groups (the population average)?

- Which special characteristics and abilities can be found?

OPD-2 as Measure of Emotional Conditioning



Operationalized Psychodynamic Diagnostic 2

- Developed as a common language for clinical psychological diagnosis
- requires diagnostic trainings
- can be done after one or several diagnostic interviews (ca. 60 – 90 min.)

Not only diagnoses emotional states but also causes of emotional discomfort

Axis II

Relationship Behavior:

- painful experiences in interpersonal relationships
- self-enhancing over time

Axis III

Conflicts:

- unconscious motivation
- repetitive throughout life
- dysfunctional and painful

Axis IV

Structure:

- basic emotional abilities
- deficits cause vulnerabilities
- efforts to hide vulnerabilities from self

Preliminary Findings of Current Emotional Finance Research Project

Preliminary Findings		
Nr.	Main (unconscious) dysfunctional conflict – Axis III	Trading Success
1	weak control tendency	break even
2	weak guilt denial	very profitable
3	very strong interpersonal care	marginal
4	very strong independence	profitable
5	very strong control	massive losses
6	very strong self-worth	massive losses
7	none	profitable
8	weak submission	break even
9	strong self-worth	very profitable
10	weak submission	minor losses
11	strong guilt denial	massive losses
12	none	break even
13	very strong independence	massive losses due to "fraud"
14	none	light losses
15	none	break even

Population and study details:

- high frequency private traders
- located all over Germany
- voluntarily participated in study
- dates obtained via OPD-2 semi structural interviews
- no monetary remuneration for participation
- evaluation of findings on demand

Preliminary conclusions and assumptions:

- strong or very strong conflicts are involved in all cases of major losses
- financial loss is consequence of conflicts, not their cause
- people with strong conflicts have a large risk of personal crises, leading to financial loss
- about 85% of patients in psychosomatic clinics have very strong dysfunctional conflicts

1) Dysfunctional conflicts seem to disable risk perception and adjustment

2) Do dysfunctional conflicts have the same effect as a brain damage had in Damasio's experiment?

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1. What is the role of emotions in financial decision-making?

- Emotions strongly influence rationality; rationality can hardly influence emotions at all
- Decision making without emotions is damaged and there is no reaction to changes in risk/return patterns
- Emotional dysfunctions seem to be involved in all cases of major capital market losses of individuals
- Emotional Finance as new dimension in financial theory can help to better understand agents and markets

2. What is the implication for financial regulation?

- Regulation should also focus on the emotions of traders and investors, not only on transparency and financial ratios
- Since you cannot control emotions in times of a crisis, this ‘emotional regulation’ needs to be implemented pre-emptively

Can Investors control their Emotions?

Emotions controllable

- Seneca and Plutarch: Emotions can be “domesticated”
- Aristoteles: Emotions are “learned” and thus should be controllable
- Assumption of controllability is basis of modern psychotherapy (positivism)

Emotions uncontrollable

- Correct for all emotions whose dynamics are completely unconscious

The investor as master of emotions



However, in times of stress or panic it is most difficult to do so

Questions?

