

Observing mindstates & existential fear

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Goal

Reporting on *insight meditation*: widening
phenomenological study of perception towards that of consciousness
in order to

decrease conditioning

decrease suffering

Will have some corollaries about phenomenology of perception

There will be some hypotheses and experimental work

Conditioning & suffering

Unicellular organisms swim towards food, away from poison

Some insects fly into candles

Some monkeys hold onto bananas; makes them vulnerable

Homo sapiens



*Worse than wine or opium
is the venom in your green eyes
that makes me fall into a deep abyss*

Baudelaire

Consciousness & meditation

Content & state

Positive and negative states

Often people optimize content

wanting a large house, a beautiful/reliable partner, a fast car

In meditation one optimizes the states

Two types of meditation:

| | | | |
|--------------------------|---|-----------------|-----------------|
| concentration meditation | ↑ | positive states | mystical states |
|--------------------------|---|-----------------|-----------------|

| | | | |
|--------------------|---|-----------------|----------------|
| insight meditation | ↓ | negative states | deconditioning |
|--------------------|---|-----------------|----------------|

The insight training

Ten day intensive retreat

discipline \mapsto concentration \mapsto insight

Sensory deprivation: no talking, no eye contact

Pay attention to sensory input, notably the breathing

When disturbance comes, e.g. thoughts, say 'thinking'

This is mindfulness: meta-awareness with some distance

When the legs hurt, say 'pain'

Disentangle pain: $\text{pain} = \text{pure pain} + \text{reaction against it}$

Disentangle: input, feeling, states, actions

Being bored: make boredom part of meditation

Mental development

Concentrate on observing breathing (meditation object)

If mind wanders, then come back to meditation object

If feelings, thoughts or conditionings are strong,
then switch to them as meditation object

Right mindfulness: attention with distance

*If there is pain,
do not consider yourself as someone that has pain,
but as someone that sees pain*

This should be practised all the time (one uses qualia)

A process of non-interfering observation, disidentification

(Husserl: *epoche*; Varela: *bracketing*; Teasdale: *meta-awareness*)

'O, there is pain', 'O, there is sadness' Later language-less

Defilement by mystical experiences

Strong pain without minding it

Also beyond desire

Strong concentration

Effortless mindfulness

Rapture & bliss

Teacher: *Also dis-identify from mystical experiences*

Student: *May we not enjoy these for some moments?*

Teacher: *It is a waste of time!*

- One does not see everything
- One becomes dependent on the concentration

The three characteristics

After diligent practise the meditator comes to see

the three fundamental characteristics

| | |
|----------------|--------------------|
| non-permanence | chaos, flux |
| suffering | nausea, unbearable |
| non-self | beyond control |

Emergency exit: strong feeling (**anxiety, depression, desire**)

Proper exit: development of more mindfulness

Continued practise: development of **Equanimity, Calm, Bliss**

this in the proximity of the three characteristics

Surrender

Mindfulness is of non-interfering nature: just observing

The only interference allowed is changing the object of meditation

The meditator surrenders

When time is ripe, mindfulness becomes automatic and the three characteristics disappear

This to a certain degree:

the purification work has to be repeated 3 more times

1. free from **insecurity, belief in self, superstition**
2. dilution of fear and desire
3. free from **fear** and **desire**
4. free from **pride, sleepiness, restlessness, attachment to existence, ignorance**

Fundamental Models of the Mind

Cover-up model based on own meditation experience ('80-'86)

Abhidhamma model from canonical Theravada texts (ca 250 BC)

based on deeper meditation;
theoretically satisfactory but daring

Cover-up model of the mind

1. Process of **3 fundamental characteristics** in human consciousness:

| | | |
|--------------|----------------|--------------|
| impermanence | mental storm | chaos |
| suffering | 'nausea' | Angst |
| non-self | beyond control | dissociation |

2. Usually the **process** of the three characteristics is 'covered-up'
symptomatic; process remains quite influential; the very cause of war

3. Second characteristic can be removed (purification)

As to 1. Can be the cause of inhuman behaviour: crime and war

As to 2. Feelings (hatred, greed) and thoughts cover-up the process

As to 3. Purification by developing *concentration* and *mindfulness*

Spectrum (according to degree of covering-up the process)

mystical state ————— pleasure/fear ————— 'nausea'
daily life

Quotes

The essential characteristic of existing

| | |
|----------------|---|
| Drug User | <i>infinite turbulence, lightning for microbes</i> (Michaux) |
| Patient | <i>as if I'm a computer going out of hand; alive but non-existent</i> |
| Existentialist | <i>nausea</i> (Sartre), <i>das Grosse</i> (Rilke) |
| Mystic | <i>dark night of the soul</i> (St. John of the Cross); <i>the abyss of the mind</i> |
| Carl Jung | One does not get enlightened by imagening beautiful light, but by looking to the darkness within |
| Meditator | <i>worse than dying; utter desperation</i> |
| Abhidhamma | <i>impermanence, suffering, selflessness</i> |

Sensual world *luxé, calme, volupté* (Baudelaire)

impermanence (chaos) vs calme

suffering (unbareable) vs volupté

selflessness (no control) vs luxé

The Abhidhamma model AM_0

Main thesis in physics (Feynman):

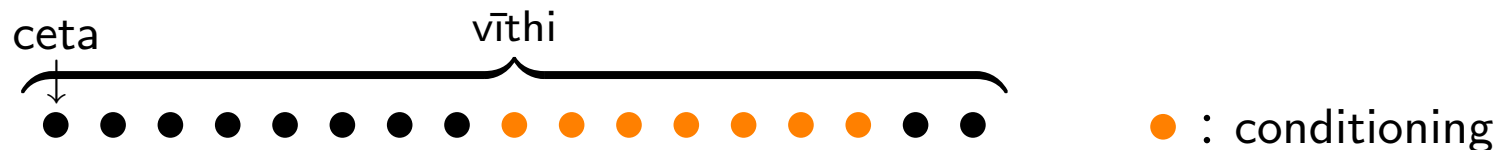
Matter is not continuous, but atomic

Main thesis of the Abhidhamma:

Consciousness is not continuous, but discrete

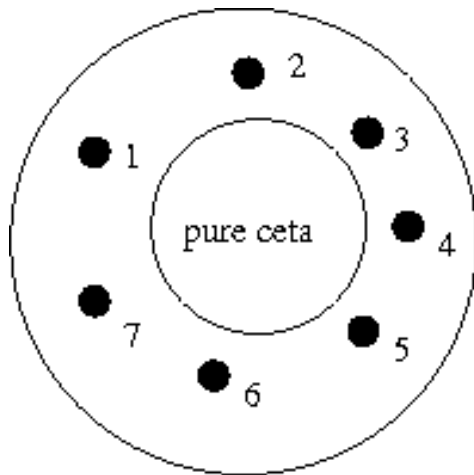
acting on three levels (in physics: molecules, atoms, elem. particles)

| | | |
|-----------|-------------------------------|------------------------|
| Cetas | ‘mental atoms’ | existing in time |
| Cetasikas | ‘mental elementary particles’ | acting in parallel |
| Vīthis | ‘mental molecules’ | acting in a serial way |



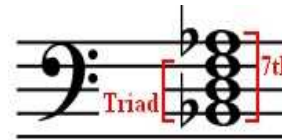
On all three levels consciousness is discrete

A ceta consists of **pure ceta** and mental factors (*cetasikas*)



- | | | |
|----|-----------------|----------------------------|
| 1. | Cooperation | (synchronization) |
| 2. | Attention | (choosing input) |
| 3. | Contact | (obtaining input) |
| 4. | One-pointedness | (focus) |
| 5. | Feeling | (value judgment) |
| 6. | Perception | (rudimentary distinctions) |
| 7. | Volition | (motivation) |

parallel input



sequence of chords

The minimal ceta consisting of pure ceta with the universal neutral cetasikas

The cetasikas act synchronously with the ceta

Pure ceta gives 'awareness', the qualia

| | |
|----------|--------------------------------|
| Dennett | not necessary |
| Stapp | explainable in quantum physics |
| Chalmers | explainable in extend physics |
| Hut | treated axiomatically |

Cetasikas

The ceta types are being determined by the cetasikas:

There are 52 cetasikas (14 **unwholesome**; 13 neutral and 25 **beautiful**)

Examples

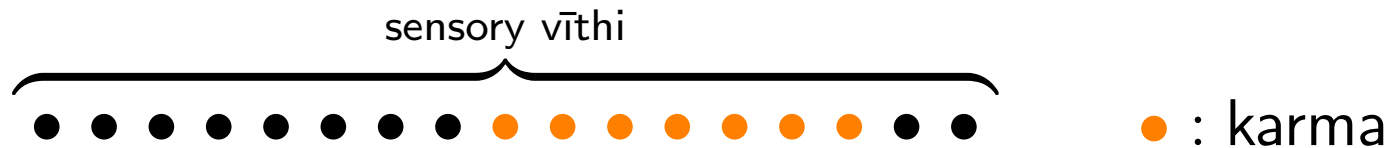
| | |
|-------------|---------------------------|
| unwholesome | greed, hatred, attachment |
| neutral | concentration, bliss |
| beautiful | mindfulness, compassion |

| | unwholesome | neutral | beautiful |
|------------|---|--|---|
| universal | ignorance restlessness shamelessness 4 | input 'feeling' concentration 7 | mindfulness detachment non-hatred 19 |
| occasional | attachment hatred sleepiness 10 | energy stronger concentration ecstasy 6 | compassion shared joy wisdom 6 |

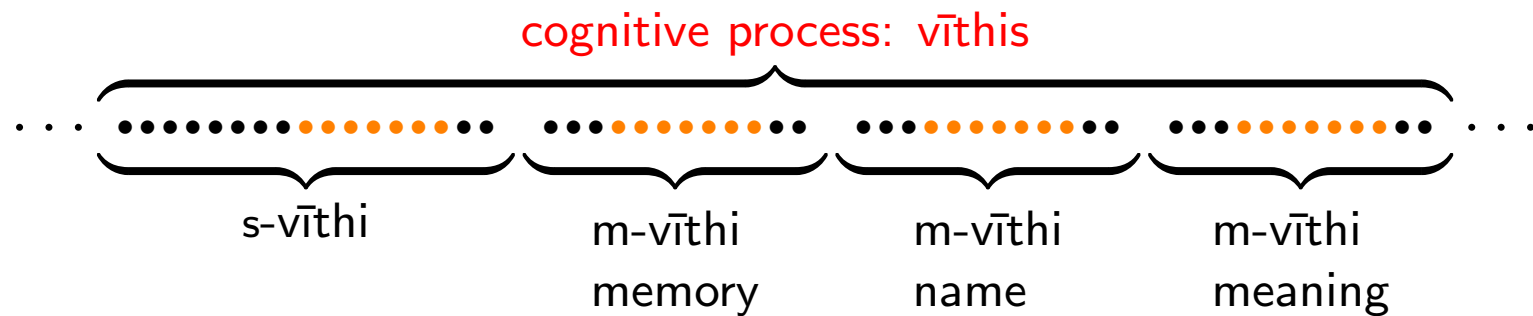
Meditation: development of neutral and **beautiful** cetasikas, avoiding **unwholesome** ones

Vīthis: 'streets' of cetas

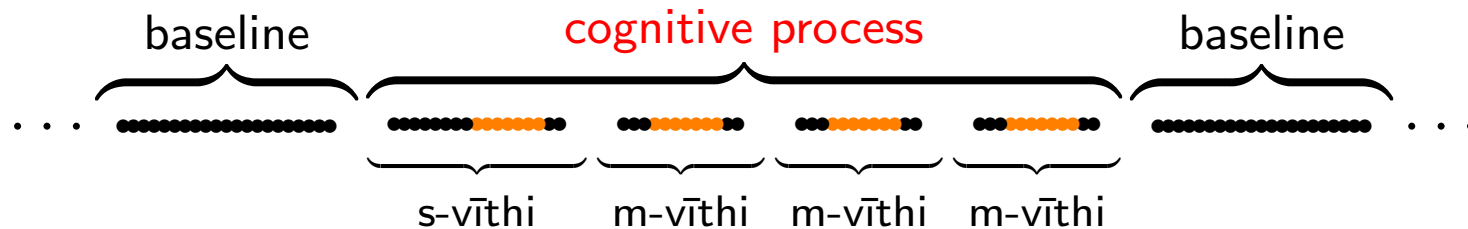
Cognitive-emotional unit



Cognition and emotion



Baseline (sequence of birth cetās)



Life-path



Karma & Turing-machines

The object and type of a ceta play a role like the 'configuration' of a Turing machine: present tape-content and state

The law of karma is like the transition table of the Turing machine
present type and content of a ceta determine future ones

The model mixes the Simon-Newell and the connectionist approach to AI: discrete rulebased & connectionist

Turing-machine, with transition rules determined by a neural network

Theory? Three characteristics

Process brain is discrete and deterministic

Cover-up Volume transmission

Purification MBSR-MBCT

Lehmann distinguishes mental atoms in multichannel EEG maps

There are 4 types of atoms, each of about 100ms

In schizophrenics: shorter duration and permuted order

In meditators shorter duration

Theory? Cover-up

For the mechanism of moods to cover-up the chaos
volume transmission (Nieuwenhuys) is a good implementation

Moreover, strong concentration (\mapsto one doesn't mind strong pain),
has similar effects as putting opioids in the liquor

Compatible with volume transmission through the liquor

In fact opioid and stress-hormone cells are shown to contact the liquor

Calle et al. opioids in the brain electro-microscopy seems to indicate exocytosis

Other evidence: Miyan, Nabiyouni & Zendah (2002); Sowards & Sowards (2003)

Development of the brain: a vital role for cerebrospinal fluid Can J Physiol Pharmacol. 2003 Apr;81(4):317-28.

Theory? Deconditioning

Mindfulness-Based Stress Reduction (MBSR) developed by Kabat-Zinn
is used in many hospitals world-wide
Is adopted by Cognitive Psychotherapy (MBCT) E.g. at ICCP05

Mindfulness: meta-awareness

‘O, there is desire’

$$\begin{aligned} \frac{\text{mindfulness}}{\text{consciousness}} &= \frac{\text{DNA}}{\text{protein}} = \frac{\text{computer program}}{\text{computable function}} \\ &= \frac{\text{observing}}{\text{reacting}} \end{aligned}$$

Using mindfulness one can get close to the feeling/thought/emotion
without getting sucked away by it

Theory

Mindfulness is related to attention, equanimity, flexibility, memory

Paul van den Hurk, Stephen Whitmarsh, Yowon Choi

1. **Greater efficiency (i.e. chance of being correct if equally fast) in attentional processing (ANT)**
Orienting attention better ($p < 0.05$)
Executive attention 'better' ($p = 0.07$)
2. M-meditation related to reduced reactivity (increased equanimity) at reflexive level; evidence from a visual-auditory startle experiment
3. Second component of mindfulness (i.e. general attentional processing, openness & acceptance) related to clinical improvement
4. M-meditation related to increase in openness and decrease in neuroticism
5. M-meditation associated to a more positive emotional bias
6. Meditators have thicker sensori-motor cortex.
7. Mindfulness meditation leads to greater happiness in all three measures: Self, Informant, and Video.
8. Long term mindfulness meditators do not differ in Self or Informant measured happiness, but do differ in Video ratings: long term meditators looked happier significantly.

Heleen Slagter et. al.

Less attentional blink after a 3 month M-meditation retreat

+ EEG explaining why

Artist's impression 1. Fulfilled love

L'invitation au voyage

*Mon enfant, ma soeur,
Songe à la douceur
D'aller là-bas vivre ensemble!
Aimer à loisir,
Aimer et mourir
Au pays qui te ressemble!
Les soleils mouillés
De ces ciels brouillés
Pour mon esprit ont les charmes
Si mystérieux
De tes traitres yeux,
Brillant à travers leurs larmes.*

*Là, tout n'est qu'ordre et beauté,
Luxe, calme et volupté.*

Invitation to the Voyage

My child, my sister,
have a sweet dream
Of living together there!
Of loving at will,
Of loving till death,
In the land that is like you!
The misty suns
Of those angry skies
Have for my spirit the charms,
So mysterious,
Of your treacherous eyes,
Shining brightly through their tears.

There all is order and beauty
Luxury, peace, and voluptuousness.

Charles Baudelaire

Music: Duparc (*L'invitation au voyage* from *Chansons*)

Artist's impression 2. Broken love

La mort de l'amour (fragment)

...

*Le vent roulait les feuilles mortes; mes pensées
Roulaient comme les feuilles mortes, dans la nuit.
Jamais si doucement au ciel noir n'avaient lui
Les milles roses d'or d'où tombent les rosées.*

*Une danse effrayante, et les feuilles froissées,
Et qui rendaient un son métallique, valsaient,
Semblaient gémir sous les étoiles, et disaient
L'inexprimable horreur des amours trépassées.*

...

Maurice Bouchor

The death of love

...

*The wind rolled the dead leaves; my thoughts
rolled like the dead leaves, in the night.
Never had the thousands of golden roses, from which
fall the dews, sparkled so softly in the black sky.*

*A terrifying dance, and the crumpled leaves
which gave out a metallic sound, waltzed,
seemed to moan beneath the stars, and told of
the inexpressible horror of the perished loves.*

...

Music: Chausson (*La mort de l'amour* from *Poème de l'amour et de la mère*)

Artist's Impression 3. Chaos beyond control



Drawing: Marianne Kalsbeek

Music: Boulez (*Tombeau* from *Pli selon pli*)

Artist's Impression 4. Purified consciousness



Seurat: Un dimanche après-midi à l'Île de la Grande Jatte

Music: Ravel (*Lever du jour* from *Daphnis et Chloé*)