

Mindfulness and non-essence
their possible use in mental health care

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Mindfulness interventions are used for enhancing quality of life

1. Mindfulness is a state of mind that can be developed

First approximations

attention, keeping it focussed

with distance: 'O, there is pain', 'O, there is sadness'

friendly and patient

with equanimity

2. Mindfulness is part of wider context:

comes from insight meditation (vipassana)

Insight meditation is more than a mental sauna making us calm

and looks for the rootcause of stress/suffering

this cause consists of our reactions to non-essence

and then it works towards domesticating those reactions

Using these eyes

there is seeing (you as audience)

but there is no one that sees

Using this mind

there are thoughts (about what to say)

but there is no one that thinks

Many of you are psychotherapists or psychiatrists
and may think 'He has lost his self'. But

one cannot say that the self does exist

nor can one say that the self does not exist

the self both exists and does not exist

and it neither exists nor does not exist

} 'tetra-lemma'

Nagarjuna (Buddhist philosopher around 100 AD)

Self exists

not as thing (reified, rigid)

but as a process (flexible)

Mental development during childhood **instable** \mapsto **stable**

Mental development as meditator **stable** \mapsto **flexible**

Monkeys like bananas so much that they cling to them

So they become vulnerable to a monkey trap (see picture)

A flexible mind has gotten rid of its bananas



politician's banana:
holding on to power

One needs *discipline—concentration—insight*

One sits very still in an actively relaxed position (dignified)

Restricting senses: closing eyes in a calm corner

Focussing attention to breathing (preferably autonomous breath)

One observes or says 'raising, falling, raising, falling, ...'

If there is rumination: as soon as one notices it, one says

'thinking, thinking, ...' and returns to observing the breath

This basis exercise performed 10'/day for 18 weeks counters ageing effects on memory in naive meditators, average age 65 yr: Moore & Malinowski [2009]

Also other 'visitors' are encountered the same way:

sensory input, pain, moods, actions

Foundations of Mindfulness: body, feelings, cognition, moods, actions

Similar to the 'cognitive model' in CBT

Sometimes visitors do not go away: suppose there is pain

'pain' ... [pain goes away] breathing

'pain' ... [pain goes away] breathing

'pain', 'PAIN' !! Doesn't go away DOESN'T GO AWAY

Separating 'pain' from 'AVERSION' \mapsto no more aversion & pain

The groups on which mindfulness is applied can be **untwined**

*Shariputra perceived that all five groups
in their own being are empty
and was saved from suffering and distress*

} Heart Sutra:
every morning
chanted in Japan

This creates emptiness

Is like a dissociation but different: all components are visible

But then something may happen:

Loosing ground, 'fear of falling apart' (D. Winnicott)

Seeing the 3 Fundamental Characteristics of Existence

3FC	'3 Fundamental Characteristics'	{	'non-permanence'	chaos
			'suffering'	nausea
			'no-self'	loss of agency

Followed by (hypnotizability!)

A	'Fear'	Anxiety
P	'Seeing danger'	Paranoia
D	'Disenchantment'	Depression

These form an important part of the clinical spectrum

Skillful teachers (available 24/7) keep this light, encouraging possibly:

1. (symptom reducing) loving-kindness, self-compassion

providing refuge (to e.g. Buddha;

William James in *Varieties of religious experiences*: to God, Christ)

2. (cure) intensified exercises with body, concentration, mindfulness

Sometimes it suffices to compare it to parachute jumping, or surfing

Observe suffering; name it as 'knowing'

do physical exercises: walking and bowing meditation

still there is 'knowing'

see where there is a physical correlate

make a wish: not that the phenomena stop,

but that they stop for a fraction of a second

after a while this works

then 2 fractions, 4, 8, 16, ...

In this way the beast gets domesticated: **coping**

If there is no residual PTS, this can be done in the order of 1-2 days

If there are residuals PTS, the same method may be applied for these

C. Meyer: first client needs to get off medication in safe environment

This is time consuming: 45d/yr-medication

We are talking about existential therapy (Yalom)

But deeper: not just fear of death, fear of **death of ego**

Needs to be confronted, **it** happens more than once in a lifetime

Traditional therapy: replacing unwholesome support by better one

A partner that is mean by a partner that is loving or being single

Is there always a stable support?

yes: **the groundless ground of consciousness**

This is still metaphysics as physics doesn't understand it

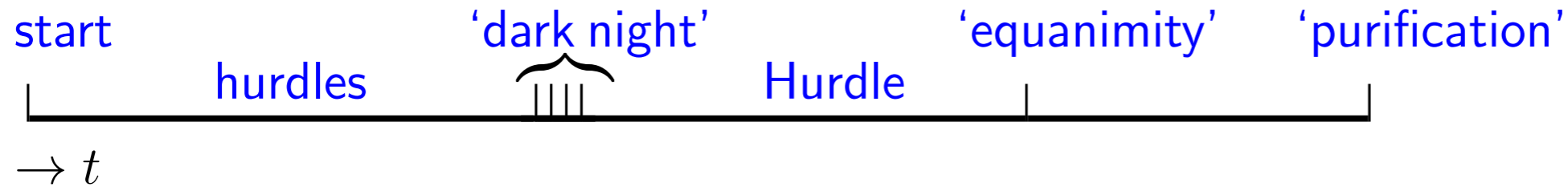
but every human knows it: just being aware (we're back to **mindfulness**)

For the meditator this requires:

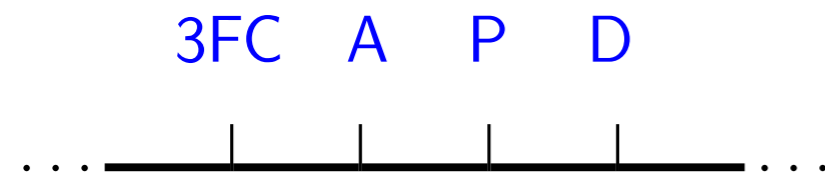
investigation, equanimity, calmness, joy

and then **determination** and **surrendering**

Purification process (first one: eliminating 'wrong view')



Zooming in on 'dark night' (may last a few moments or longer)



3FC	'3 Fundamental Characteristics'	{	'non-permanence'	chaos
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Is an important part of the clinical spectrum

Cantar de la alma

Qué bien sé yo la fonte que mana y corre:
aunque es de noche.

Aquí se está, llarnando a las criaturas,
y de esta agua se hartan, aunque a oscuras,
porque es de noche.

Bien sé que suelo en ella no se halla,
y que ninguno puede vadealla,
aunque es de noche.

Juan de la Cruz

Song of the soul

How well I know the spring that flows and runs
even if it is night.

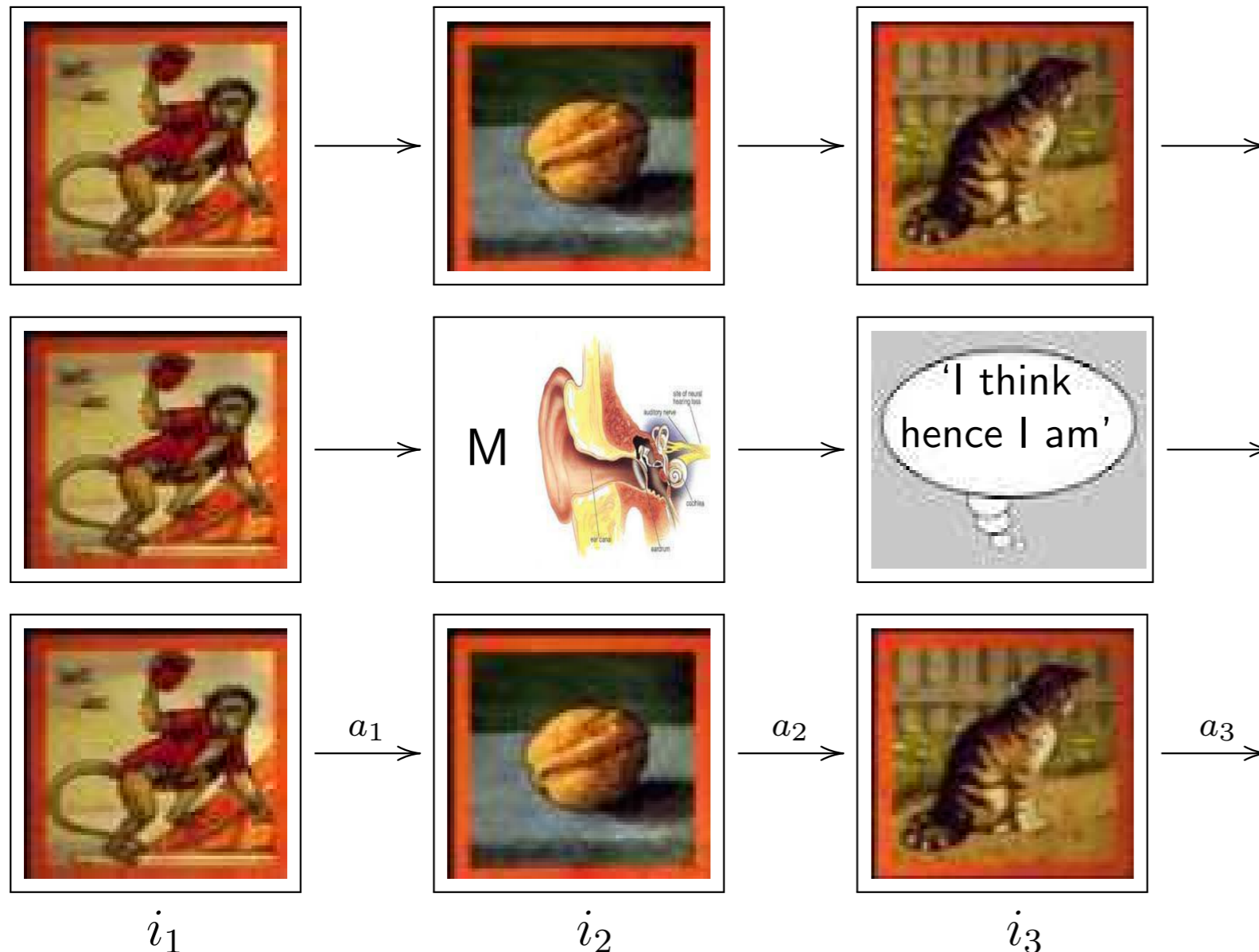
'Come here' it calls all creatures
they drink from its water, even in the dark
because it is night

Well I know its groundlessness
and that no one can conquer it
even if it is night.

John of the Cross (1542-1591)

Music: Sergio Militello (1969); Tenor: Emiel Hoefnagel; Oboe: Lidia van der Vegt;
Flute: Appelona Klarenbeek; Harp: Heleen Venekamp

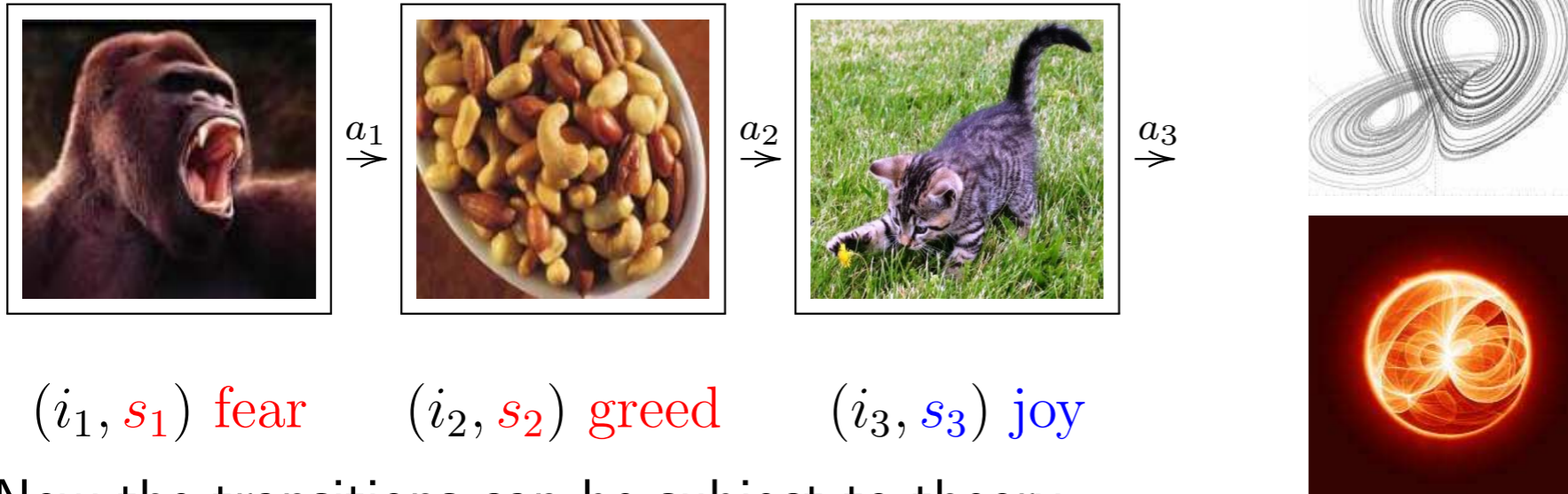
Consciousness always has an object and proceeds serially. vanRullen-Koch [2003] Wagon-Weel-Illusion; Lehmann [1995]: atoms in EEG maps (100ms, shorter in schizophrenics)



i : input, a : action. Too restricted (stimulus-response of behaviorism)

in this way the same input results in the same action

Consciousness also has a (momentary) state: readiness to act



Now the transitions can be subject to theory

States exist mathematically, only approximately known, one can *reason* about them

States more than input are determining what happens

States determine whether we are e.g. creative, destructive, or hesitant

States determine us, but we cannot directly determine our states!

Our (daily) life (Zylberberg-Dehaene-et.al [2011], Barendregt-Raffone [2013]):

$$(i_1, s_1, a_1) \rightarrow (i_2, s_2, a_2) \rightarrow (i_3, s_3, a_3) \rightarrow \dots$$

Turing Machine model: runs **deterministically**: sometimes we get stuck ('strange attractors' above)

The Turing Machine model explains:

precision of human prediction, in spite of biological noise

chaos the mind-moments may not run smoothly

non-self states determine our life

β -endorphin is known to stabilize states

gives us the impression of free stability

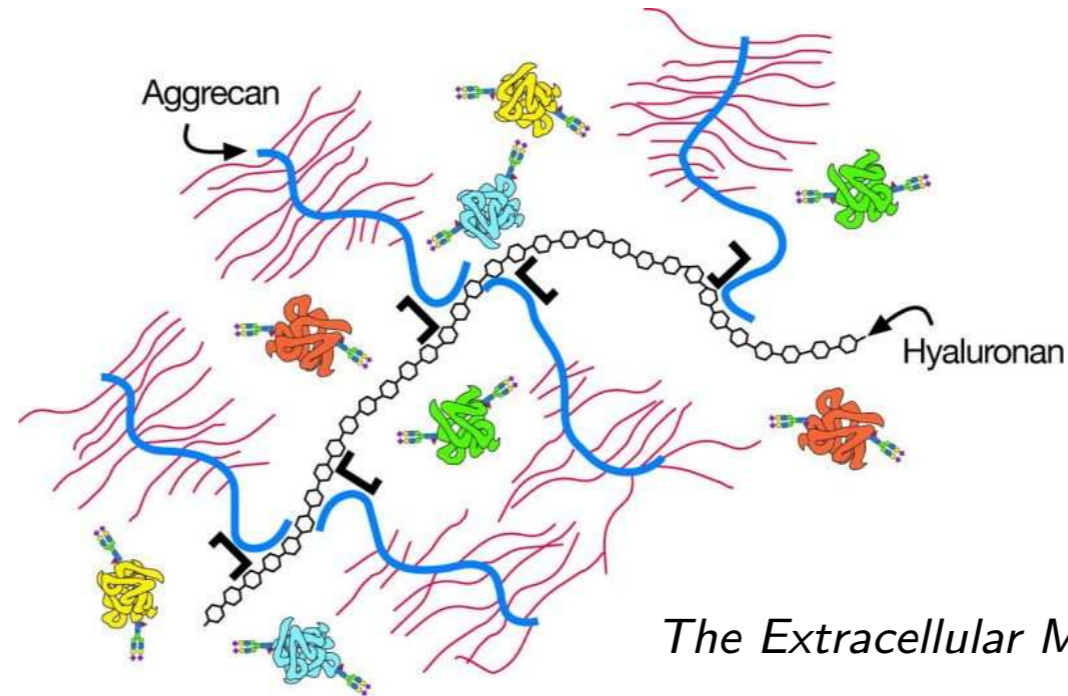
this is the background of addiction, bananas, placebos

Its global fast effect runs through the cerebro-spinal fluid (CSF)

This form of *volume transmission* may enable concentration meditation

A state has three aspects

- state {
 1 phenomenological
 2 neurophysiological
 3 behavioural



The Extracellular Matrix

Key: [T-shape] = Link protein [colored shapes] = Glycoproteins

Possible functioning of states

Aspect 1. Acquired memory associations

Aspect 2. • Sustained neural activity (eg frontal-lobe-amygdala Salzman-Fusi [2010])

• Volume transmission

Fuxe-Agnati [2000]

(through extracellular space)

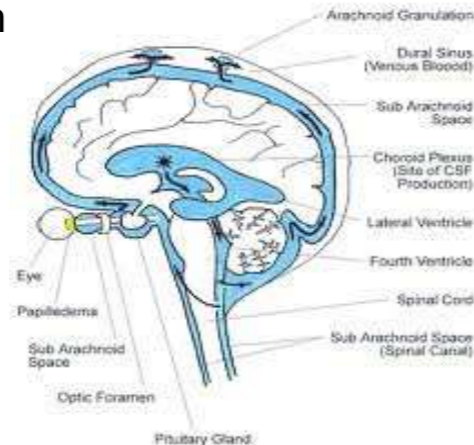
Veening-Barendregt [2010]

(through cerebrospinal-fluid)

Fuxe-Agnati [2009]

(exploiting extracellular tortuosity forming the extracellular matrix with barriers, see above)

The ventricle system



Aspect 3. How does mindfulness modify behavior?

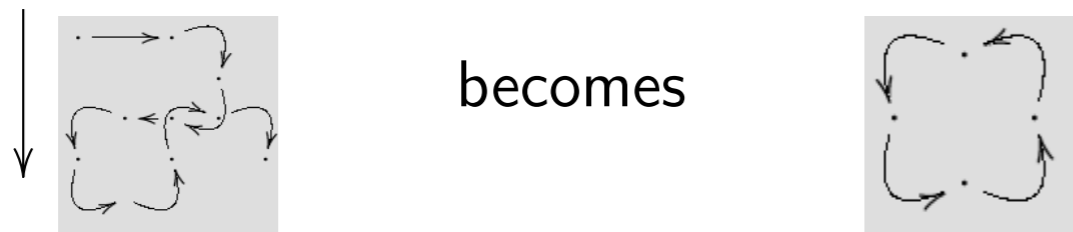
Hypothesis. Observing 'action code' just before it is executed $(i, s, a) \rightsquigarrow (i + s, s_0, a)$

(can be overruled as in a universal Turing Machine see Barendregt-Raffone [2013])

Domestication of (dys)functional states through mindfulness training/meditation

How? Needed: discipline, concentration, insight

- sensory restriction
- mental restriction: attention on e.g. breathing
- restrict action: sit still
- the (i, s, a) -chain becomes an (s) -chain



- observe reduced stream of states with continued mindfulness
- seeing vicious circle: stepping out (deconditioning) with a 'reset'

Observing the same position several times, we stop (think of chess)

The attachment is caused by not recognizing that
consciousness is determined and fluctuating

Realizing it brings flow; determinism brings relief: no more pretending

Hypotheses

1. Clinical mind states are caused by symptomatic covering-up emptiness ('death of ego')

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- G Limonta Case story: Patient prefers an illusion over chaos. 2013

2. Careful Mindfulness Intervention may help schizophrenic patients

- M McGee Meditation and Psychiatry, *Psychiatry* 5(1), 2008, 28-41.
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- L Dennick et al. "Mindfulness groups for people experiencing distressing psychosis",
Mental Health Rev. J., 18(1), 2013, 32-43.

Plan (Italian therapist): place four strong meditators with loving kindness, compassion, shared joy, and equanimity in a room. Treat the patient in their vicinity

Based on trained introspection and reasoning: to be verified.

Successes of this methodology elsewhere:

- Mathematics
- Goethe's theory of color vision

Ch de Weert: Thesis on color vision with $N=1$, experimenter=subject

Successes of phenomenology based on meditation:

JG Veening, HP Barendregt The regulation of brain states

by neuroactive substances distributed via the cerebrospinal fluid; a review

Fluids and barriers of the central nervous system, 2010, 7(1).

And 6 other papers on CSF Volume transmission: see

dhammapages.wordpress.com/neurobiological-papers/

As to falling apart there are two opposite attitudes:

- **trying to glue** coping, drugs, ideas, activities, religion
- **doing it with grace** developing 'courage deluxe' (Rilke)

The second method deserves to be known and studied better
using also the neurophenomenological method (Varela [1996])

Music: Sadness with distance, without clinging

Les cinq doigts: moderato (54") Igor Strawinsky (1881-1971)

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