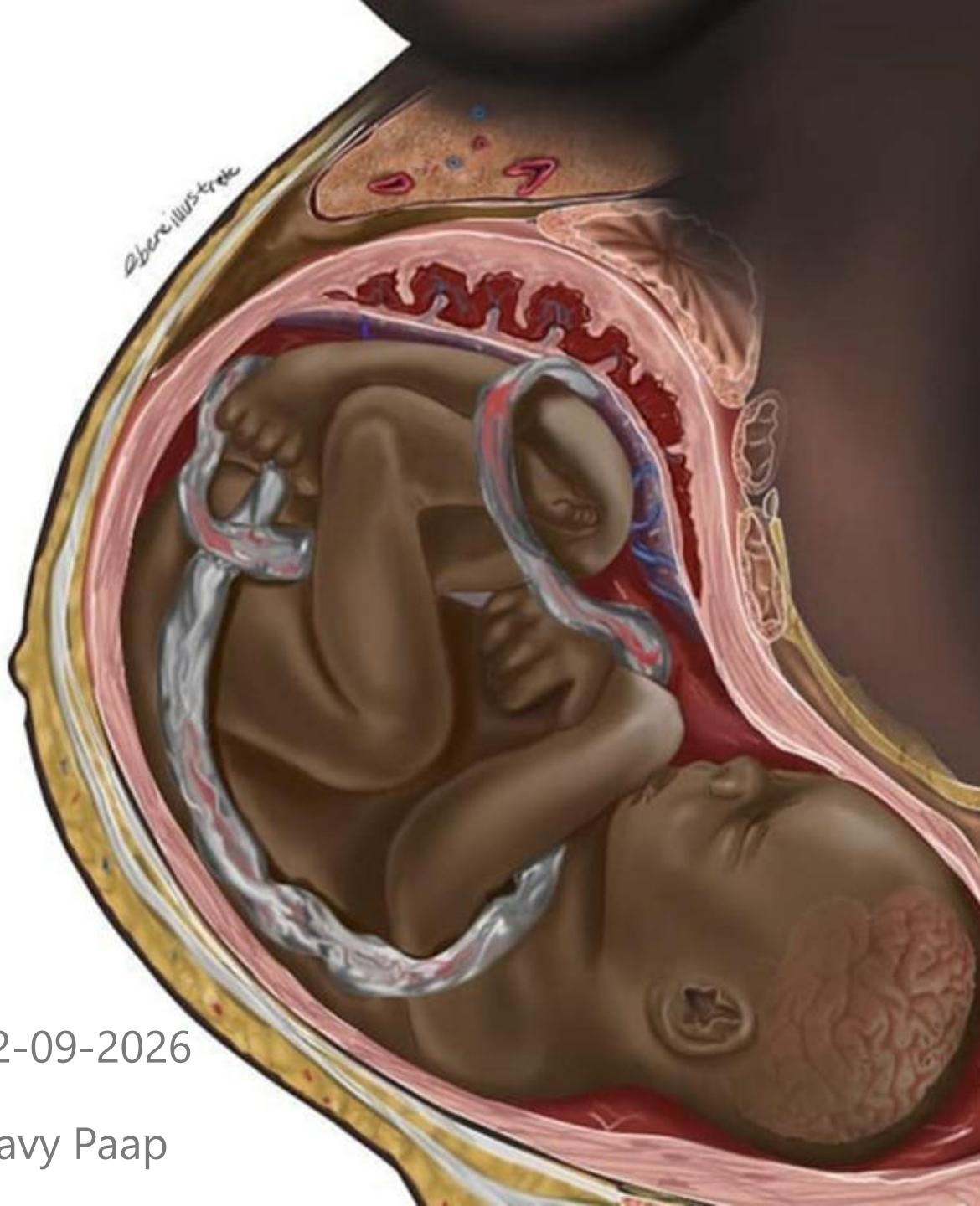
Embodiment in de Fysiotherapie



university of groningen

UMCG

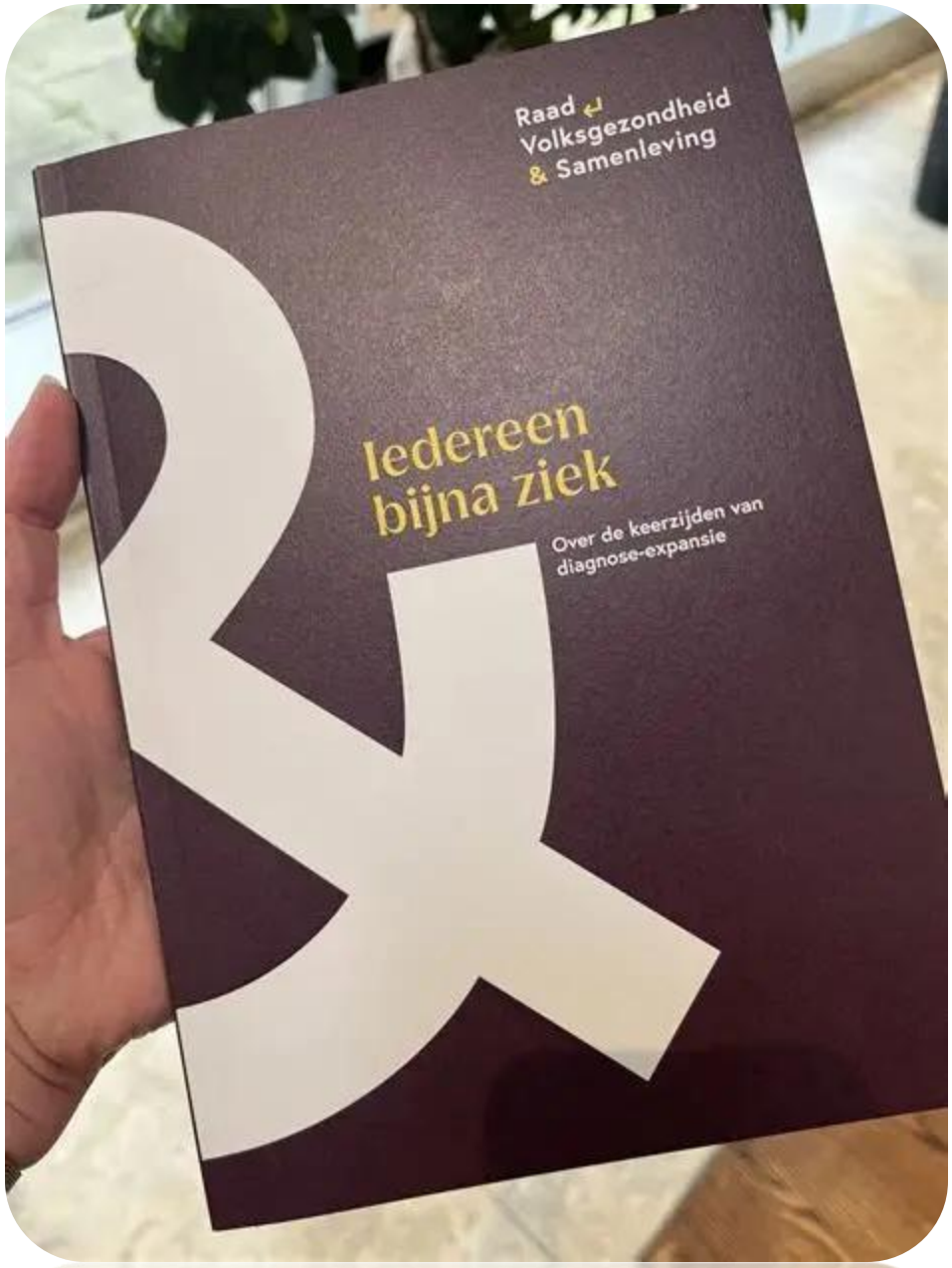
SAXION HOGESCHOOL



22-09-2026

Davy Paap


Pathogenesis
The Study of Disease
Salutogenesis



SAXION HOGESCHOOL

World view



By Jim van Os

Is it time to dispense with the 'bible for psychiatry'?

Proposed updates to the *DSM*, used to classify and diagnose common mental-health conditions, will fail to address its flaws.

For more than 70 years, physicians seeking to diagnose mental-health conditions have turned to the 'bible for psychiatry' — *The Diagnostic and Statistical Manual of Mental Disorders* (*DSM*). Last updated in 2022, and published by the American Psychiatric Association (APA), the *DSM* sets out diagnostic criteria for a panoply of mental-health conditions, from autism spectrum disorder to substance-use and personality disorders.

For almost as long, the manual has been hotly critiqued. In January, the APA announced a future road map to address some of the criticisms. For example, the APA plans to start including data on the biological, environmental and cultural causes of mental-health conditions — long-discussed gaps in the manual. It also emphasizes the importance of consulting people with lived experience.

These changes aim to refine clinicians' abilities to diagnose individuals. But in my view, this is just tinkering with a flawed approach. Improved lives are more important than diagnoses. Experts in psychiatry need to focus on the care that people need — not the label assigned to them.

In the Netherlands, roughly 25% of the population has been diagnosed with a mental-health disorder (M. ten Have *et al. World Psychiatry* **22**, 275–285; 2023). But diagnoses don't tell us what drives the feelings behind these conditions, or how to abate those that are problematic. Indicators of deteriorating mental health — such as persistent sadness and suicidal ideation — align with social inequality, educational pressure and other stressors. Treating poor mental health as solely a medical issue, rather than one with a social component, decreases the impetus to tackle the root problem.

Mental distress is poorly captured by symptom lists and labels. People who are diagnosed with anxiety, addiction or psychosis might all describe feelings of entrapment or hopelessness. Two people diagnosed with the same disorder will have different vulnerabilities to, say, stigma or self-harm, different resources available to them and different care needs. It is these needs that clinicians should focus on.

If the basic logic of the *DSM* is flawed, it should be abandoned. Instead, psychiatrists should move towards a system that looks at an individual's mental experiences in context, alongside their unique developmental vulnerabilities and strengths, as the main source for analysing and responding to their distress. Diagnosis would no longer name a disorder but map what kinds of support, relationships and learning processes are most likely to help a person regain agency, coherence and a sense of future.

> **"If the basic logic of the *DSM* is flawed, it should be abandoned."**

Jim van Os is a professor of psychiatry at University Medical Center Utrecht, Utrecht, the Netherlands. e-mail: j.j.vanos-2@umcutrecht.nl

Take a person who presents with paranoia, hearing voices, social withdrawal, sleep disruption and cannabis use. At present, they might be diagnosed with schizophrenia and directed towards medication and — if available — individual psychotherapy. Using a model that is based on care needs, that person might be offered help with substance regulation, support in rebuilding trusting relationships and access to a peer-support group.

In the Netherlands, six regions are trialling an approach based on people's care needs that I helped to design (J. van Os *et al. Clin. Pract. Epidemiol. Mental Health* **19**, e174501792712O6; 2023). The approach involves cooperation between many services: mental health; primary care; social care; peer-support communities and more. Under this model, mental-health care is mainly choice-driven, allowing people to enter the system through any service. An initial conversation with a practitioner scopes out a person's needs, and they can then move between forms of support flexibly, without referrals. Psychiatrists and psychologists can provide advice and support through any of these services for high-risk or complex cases.

I urge organizations such as the APA to advocate for such care systems. In my view, the APA should ditch the new *DSM* road map and redirect its focus to investigating alternative approaches to ensuring best practice. Moving towards such a system requires a shift in research, too. Researchers should focus on how individuals' mental experiences unfold over time and how different contexts amplify or soften them.

Many psychiatrists will be wary of discarding diagnostic labels. Diagnoses such as attention deficit hyperactivity disorder or autism can offer people recognition and access to support. But psychiatrists and others should resist equating labels with a person's identity or behaviours.

Medication is already transdiagnostic. Antidepressants, antipsychotic drugs and mood stabilizers are prescribed for several mental-health conditions. A needs-based approach to care would link medication to a core issue, helping to reduce anxiety or stabilize sleep, for example.

The risk of change exacerbating inequalities is a legitimate concern, particularly for women and people from minority backgrounds whose experiences are commonly dismissed. But most diagnostic categories were developed in narrow cultural and historical contexts and often reflect assumptions about gender, behaviour and emotional expression. By contrast, focusing on a person's individual experience makes it easier to recognize distress that does not match stereotypical presentations.

It's time to start asking: 'What is happening here and what conditions would help this person to move forwards?' Through this approach, psychiatry can remain clinically effective while becoming more equitable and more aligned with people's lives.

CNRS/ERM/M24

SAXION HOGESCHOOL

Echtewereldwetenschap

Jan Kremer | 21 maart 2025 | Leestijd: 3 minuten

DELEN

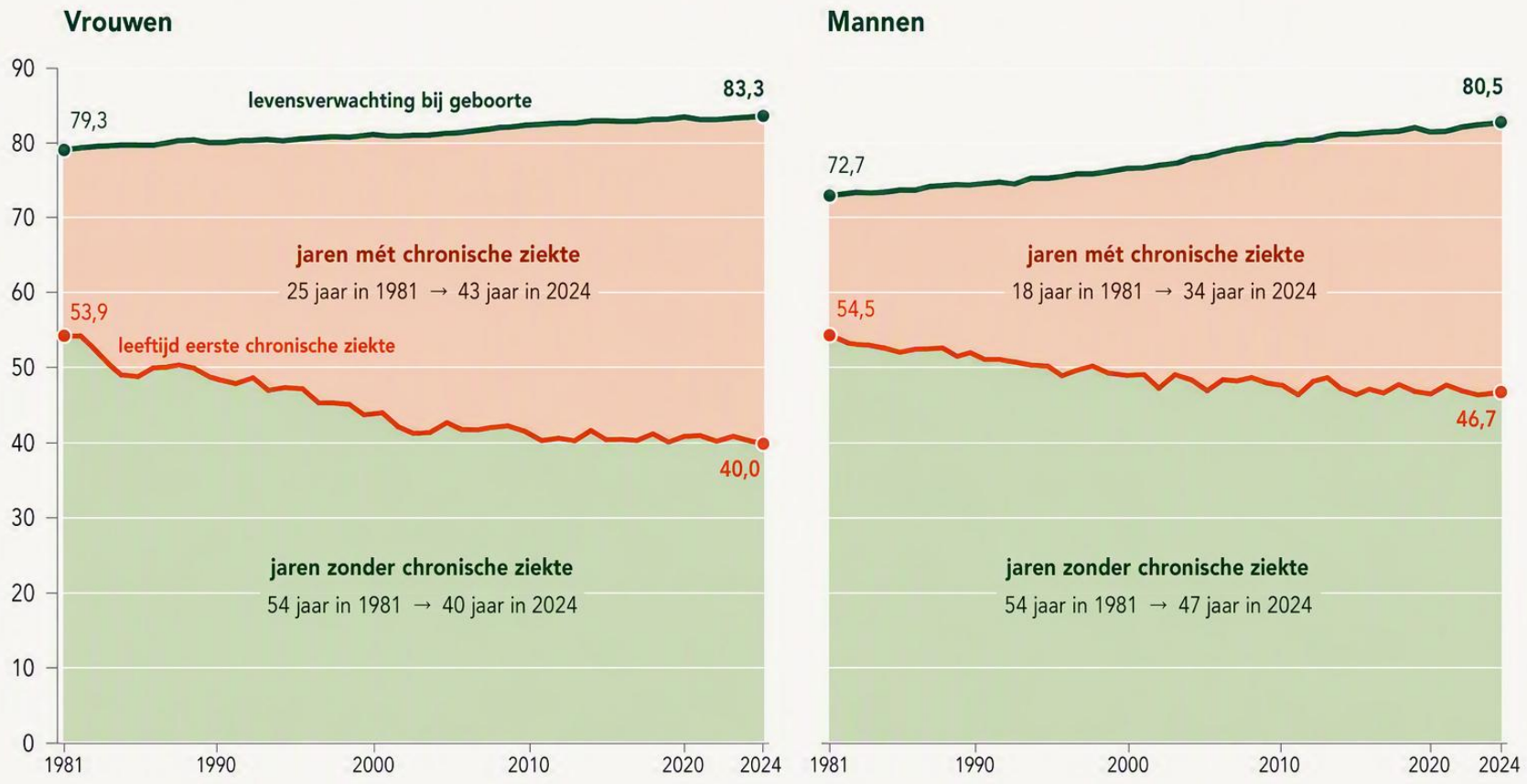
De zorgpraktijk is complexer dan traditionele wetenschappelijke methoden vaak blootleggen. Jan Kremer pleit voor een bredere kennisbasis waarin niet alleen evidence, maar ook praktijkervaring en contextuele kennis uit de echte wereld een volwaardige rol krijgen. Want goede zorg draait niet alleen om feiten, maar ook om waarden.

‘Als jullie dit echt vinden, wordt het tijd om jullie toga’s ritueel te verbranden. Jullie zijn het niet waard om dit symbool van de wetenschap te dragen.’ Oef, dat was even schrikken toen deze opmerking onze kant uit kwam bij de aanbieding van *‘Zonder context geen bewijs’*.

Dit advies van de Raad voor Volksgezondheid en Samenleving (RVS) uit 2017

Nederland leeft langer, maar steeds korter gezond

Levensverwachting bij geboorte en de leeftijd waarop de eerste chronische ziekte begint, 1981-2024



Bron: CBS StatLine, Gezonde levensverwachting vanaf 1981 (tabel 71950ned). Bewerking: & Loefstijl Als Medicijn.

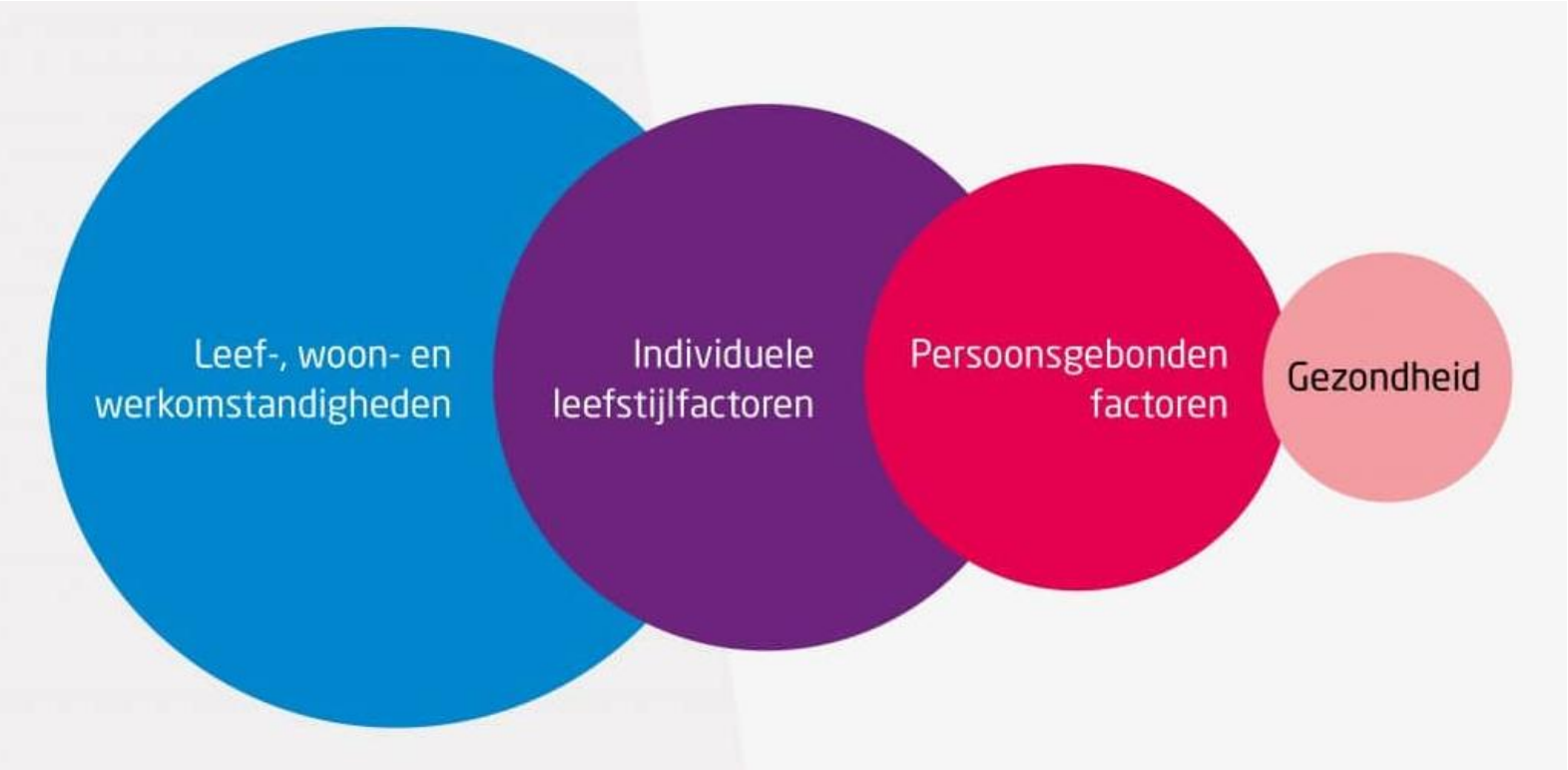
SAXION HOGESCHOOL

Bijdrage leefstijlfactoren op ziektelast in Nederland

	Ziektelast	Sterfte	Zorguitgaven €	Nederlanders die **niet** voldoen aan norm voor gezond gedrag
Alcoholgebruik	1,5 %	1.800	0,9 miljard	57 %
Ongezonde voeding	8,1 %	12.900	6,0 miljard	49,5 - 89,5 %*
Roken	9,4 %	20.000	2,4 miljard	18,9 %
Weinig beweging	2,3 %	5.800	2,7 miljard	53 %

NHG leefstijl feiten-en-cijfers 2024

Samenhang gezondheid, gedrag en omgevingsfactoren



Verschil in SES =
- 25 jaar langer in gezondheid
- 7 jaar korter

NHG leefstijl feiten-en-cijfers 2024 CBS 2022

Time for change?

- 1 op 5 Nederlander heeft chronische pijnklachten
- 1 op 4 Nederlander heeft enige psychische stoornis
- Capaciteitsproblemen
- Financiële problemen
- Ziektelast

SAXION HOGESCHOOL

Ten have et al., 2022 World Psychiatry; Bekkering et al., 2011; Kaljouw 2020 et al., NZA & ZIN

BioPsychoSocial model lost in Translation

- Biomedicaliseerd, fragmenteert, en reductionistisch gebruikt
- “Body like a broken machine”
- Sterke dominantie op biologische en cognitieve aspecten
- Lastig implementeerbaar
- Concept onvoldoende uitgewerkt om uitvoerbaar te zijn

Mescouto et al., *Perspective in Rehab* 2020| Cormack et al., *Phys Theor and Pract* 2022

SAXION HOGESCHOOL

Confirmatorische factor analyse GLAS cohort (n=325)

Axiale spondyloartritis (Bechterew)

ASDAS	**2.2 ± 0.86**
≥2.1	**168 (50.6%)**

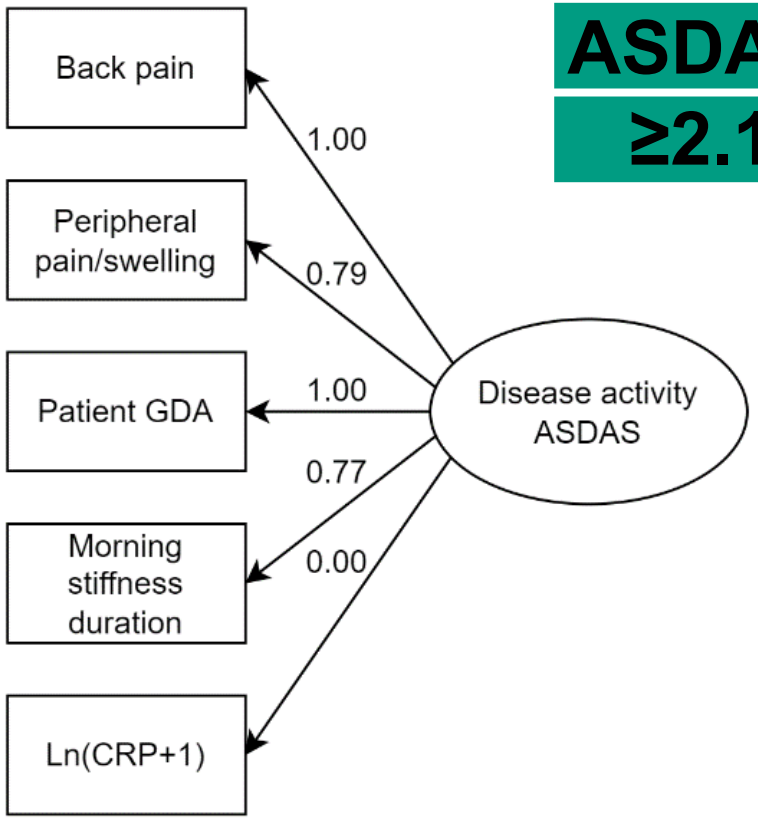


Figure S2. ASDAS confirmatory factor analysis. Values shown are unstandardized factor loadings. GDA: global disease activity; CRP: C-reactive protein; ASDAS: Ankylosing Spondylitis Disease Activity Score.



Kieskamp et al., *Rheumatology,* 2025

Structural Equation Modelling analyse GLAS cohort (n=325)

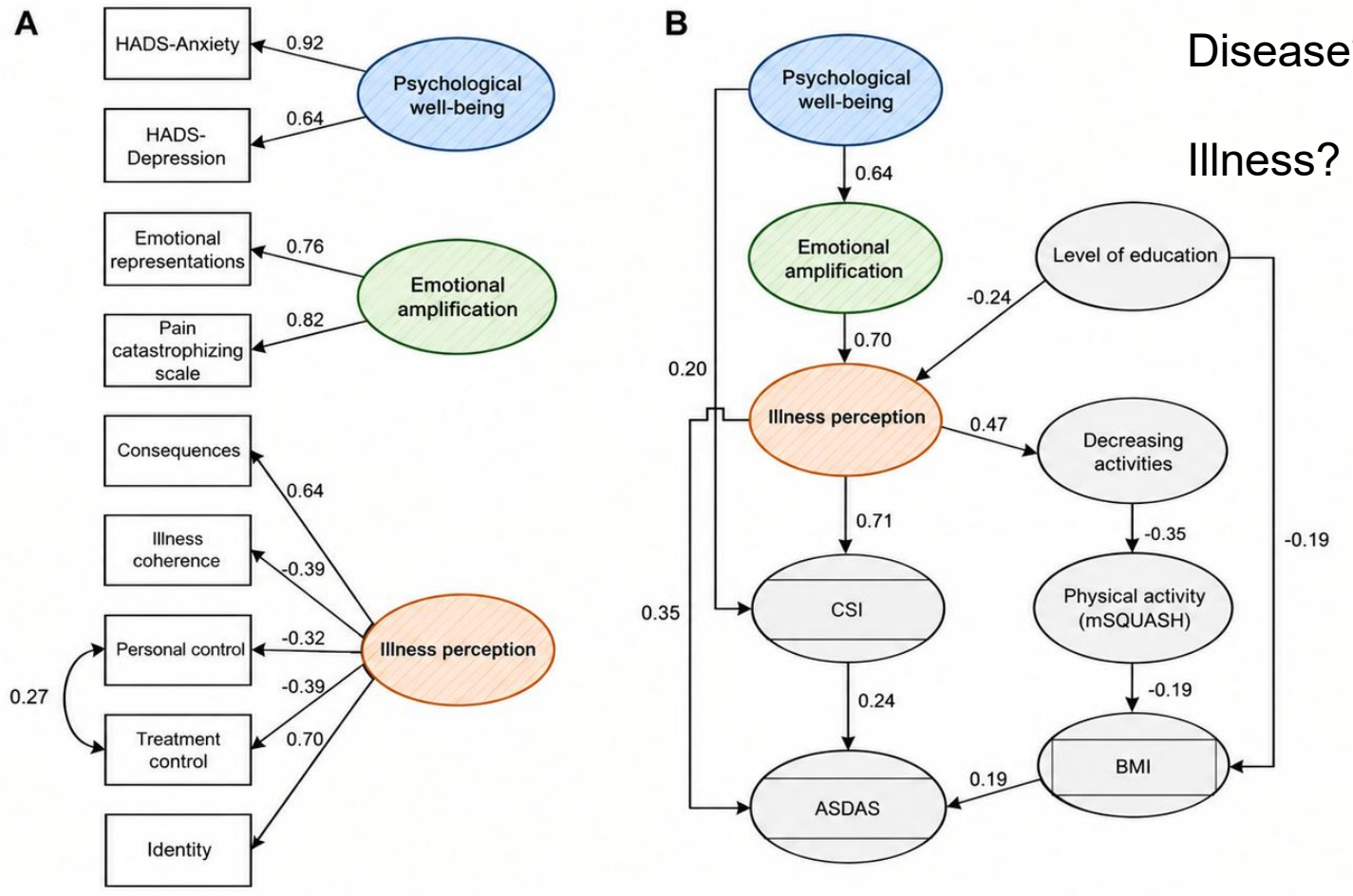


Figure 1. Graphical representation of structural equation model. Values shown are significant standardized parameter estimates. Ellipses contain latent variables; rectangles contain indicator variables; circumscribed rectangles contain observable variables. (A) Measurement model, (B) structural model. ASDAS: Ankylosing Spondylitis Disease Activity Score; CORS: Coping with Rheumatic Stressors questionnaire; CSI: Central Sensitization Inventory; HADS: Hospital Anxiety and Depression Scale; mSQUASH: modified Short QUestionnaire to Assess Health-enhancing physical activity

Kieskamp et al., *Rheumatology,* 2025

Aristoteles

384 v.Chr -322 v.Chr

Een met rede begiftigd dier/ levend wezen



SAXION HOGESCHOOL

René Descartes

De mens (en wereld) als machine 1596-1650

‘Maar onmiddellijk daarop besefte ik dat, terwijl ik aldus wilde menen dat alles onwaar is, **het noodzakelijk was dat *ik* die dat dacht,** iets was. […]

Toen ik mij vervolgens bezighield met de vraag wát ik was, en besefte dat ik kon doen alsof ik geen lichaam had, en dat de wereld niet bestond […] terwijl ik dat alles nu overwoog, **concludeerde ik dat ik een substantie was waarvan heel het wezen of de natuur slechts is dat ze denkt** en die om te bestaan geen plaats nodig heeft, en niet afhankelijk is van enig stoffelijk ding.

Dat ik, dat wil zeggen, de ziel, waardoor ik ben wat ik ben, is dus **geheel van het lichaam onderscheiden** […].

“Cogito, Ergo, Sum, ik denk, dus ik ben”

Discours de la méthode.

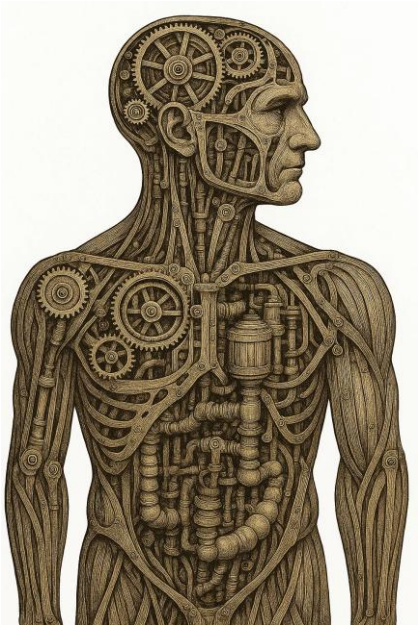


De mechanisering van het wereldbeeld

Descartes: Meten is weten

Werkelijkheid wordt begrijpbaar, berekenbaar

Voorspelbaar, controleerbaar, munipuleerbaar



Sora OpenAI



“Het” Lichaam



SAXION HOGESCHOOL

Michel Foucault: Geboorte van de kliniek

1921-1984

Eerste Epistemologische breuk (verandering van het Discourse)

Nosologie & pathologie (ziekteleer)

Weefselleer

Siége du mal (haart van de ziekte)



SAXION HOGESCHOOL

Medische sociologie

Disease

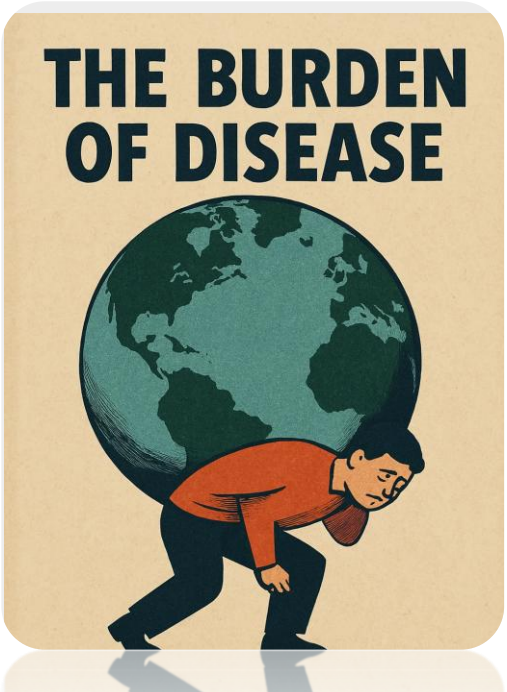
Pathologie, etiologie, nosologie

Illness

Ervaring van ziek zijn (lived-experience)

Sickness

Gezondheidsproblemen, rol samenleving



Sora OpenAI

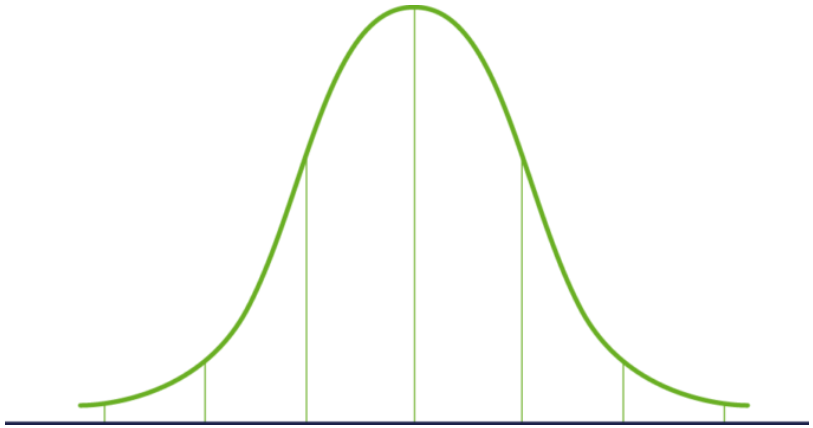
Ziekte gekwantificeerd – het normale lichaam

Tweede Epistemologische breuk (verandering van het Discourse)

Afwijking normale toestand = impliceert ziekte

Statistische ontwikkeling

Descriptief model ≠ normatieve model (Ian Hacking)



Edmund Husserl

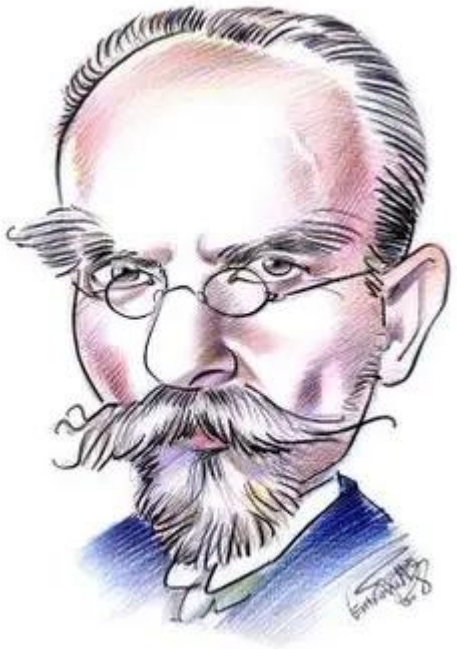
1859-1938

Grondlegger van de fenomenologie

Fenomenologie onderzoekt hoe de wereld aan ons verschijnt voordat we haar verklaren

- Betekenissen
- Relaties
- Verwachtingen
- Praktische ervaringen

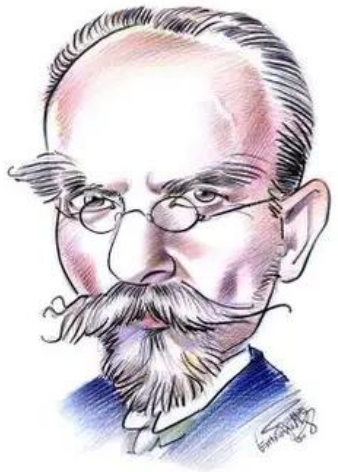
Voorwetenschappelijkwereld = leefwereld



SAXION HOGESCHOOL

Körper — *Leib*

Object — Subject



SAXION HOGESCHOOL

Maurice Merleau- Ponty

1908-1961

Fenomenologie van de waarneming (1945)



SAXION HOGESCHOOL

Lichamelijke nulpunt

“Het lichaam is ons algemene middel waardoor wij een wereld hebben”

Maurice Merleau- Ponty
Fenomenologie van de waarmneming (1945)



SAXION HOGESCHOOL

Embodiment

“Lichamelijkheid”

Denken, handelen, willen en voelen vertrekt niet vanuit een immateriële geest, maar vanuit een belichaamd in de wereld zijn

Mens- zijn = lichamelijke- zijn
Lichamelijke- zijn = in een context, omgeving bestaan

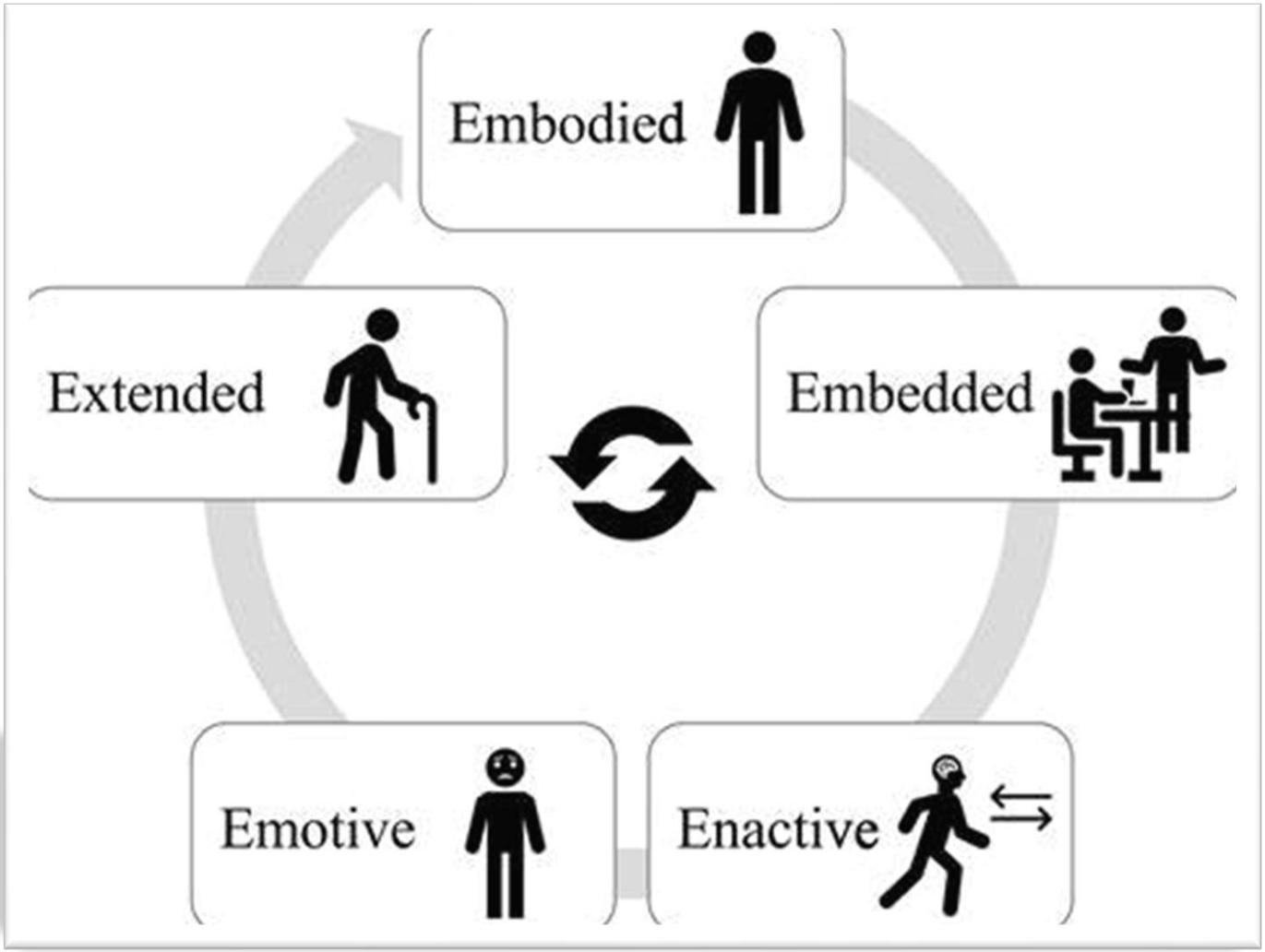
Mens- zijn ontleden = kijken naar de relatie tussen bepaalde lichamelijkheid en omgeving/ context

“Ik kan”

“Het bewustzijn is oorspronkelijk geen ‘ik denk’ maar een ‘ik kan’”

Maurice Merleau- Ponty
Fenomenologie van de waarmneming (1945)

SAXION HOGESCHOOL



Stillwell & Harman, *Int Journal of Qual methods* 2021

Neuroscience Research 104 (2016) 16–30

Contents lists available at ScienceDirect

Neuroscience Research

journal homepage: www.elsevier.com/locate/neures

Review article

Body representations in the human brain revealed by kinesthetic illusions and their essential contributions to motor control and corporeal awareness

Eiichi Naito [a,b,c,*], Tomoyo Morita [a,d], Kaoru Amemiya [a,e]

[a] Center for Information and Neural Networks (CiNet), National Institute of Information and Communications Technology (NICT), 1-4 Yamadaoka, Suita, Osaka 565-0871, Japan
[b] Graduate School of Medicine, Osaka University, 2-15 Yamadaoka, Suita, Osaka 565-0871, Japan
[c] Graduate School of Frontier Biosciences, Osaka University, 1-3 Yamadaoka, Suita, Osaka 565-0871, Japan
[d] Graduate School of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan
[e] The Japan Society for the Promotion of Science, 5-3-1 Koujimachi, Chiyoda, Tokyo 102-0083, Japan

ARTICLE INFO

Article history:
Received 1 September 2015
Received in revised form 22 October 2015
Accepted 23 October 2015
Available online 10 November 2015

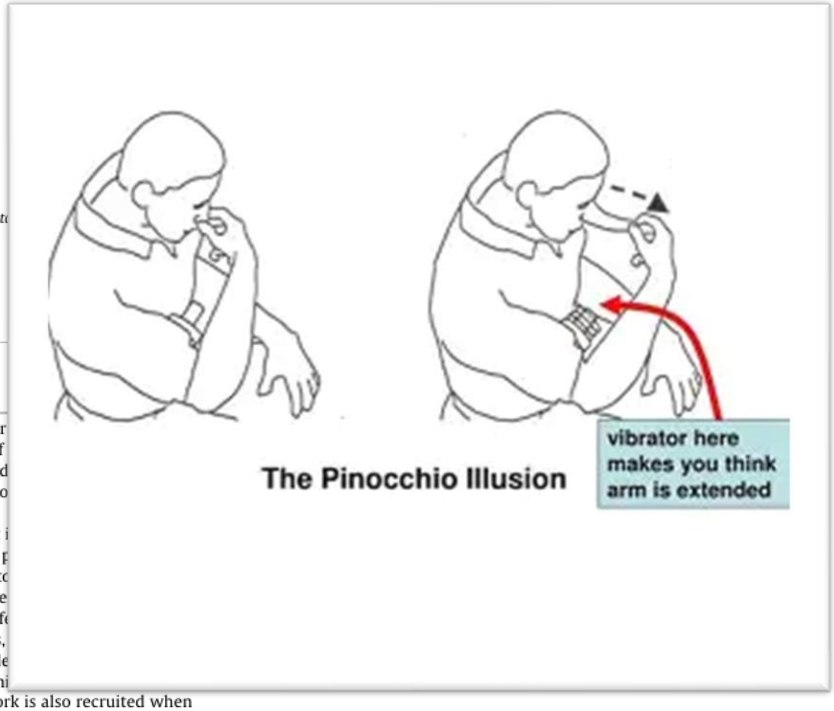
Keywords:
Muscle spindle
Kinesthesia
Body representation
Motor control
Sensory-motor association
Corporeal awareness
Self-consciousness
Functional magnetic resonance imaging

ABSTRACT

The human brain can generate a continuously changing postural model of our
ceptive) signals from skeletal muscles and joints contribute to the formation of
Recent neuroimaging studies of proprioceptive bodily illusions have elucidated
brain systems (motor network, specialized parietal systems, right inferior fronto
formation of the human body representation.

The motor network, especially the primary motor cortex, processes afferent i
cles. Such information may contribute to the formation of kinematic/dynamic p
thereby enabling fast online feedback control. Distinct parietal regions appear to
the transformation/integration of information across different coordinate syste
the adaptability and flexibility of the body representation. Finally, the right inf
work, connected by the inferior branch of the superior longitudinal fasciculus,
when an individual experiences various types of bodily illusions and its possible
awareness, which is likely elicited through a series of neuronal processes of moni
bodily information and updating the body representation. Because this network is also recruited when identifying one's own features, the network activity could be a neuronal basis for self-consciousness.

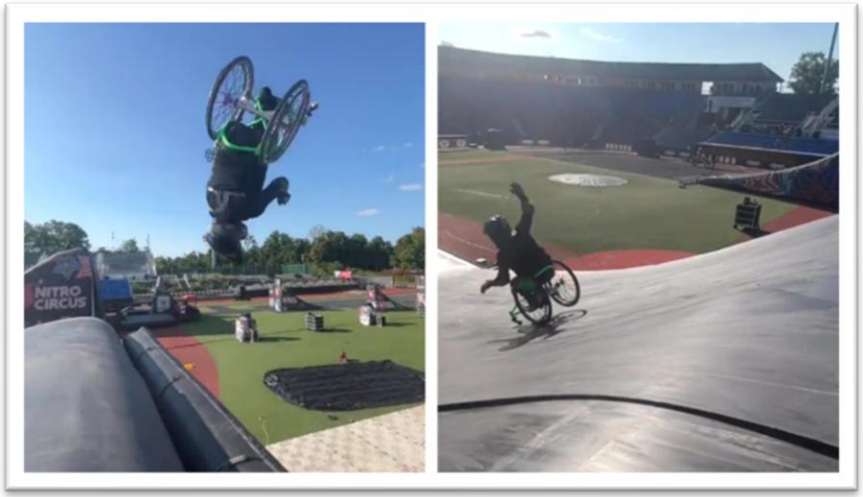
© 2015 Elsevier Ireland Ltd and the Japan Neuroscience Society. All rights reserved.



SAXION HOGESCHOOL



“Ik kan niet”

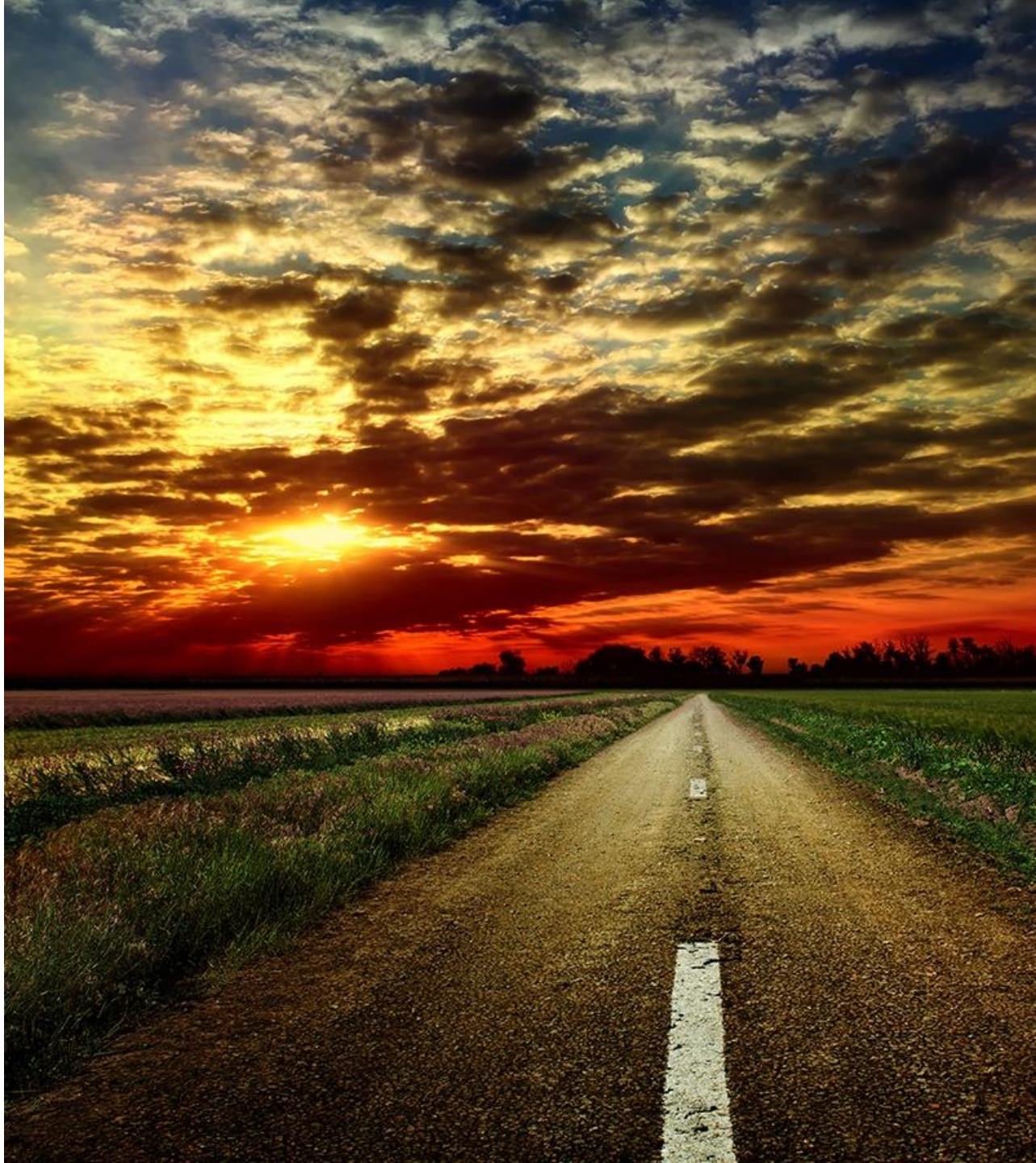


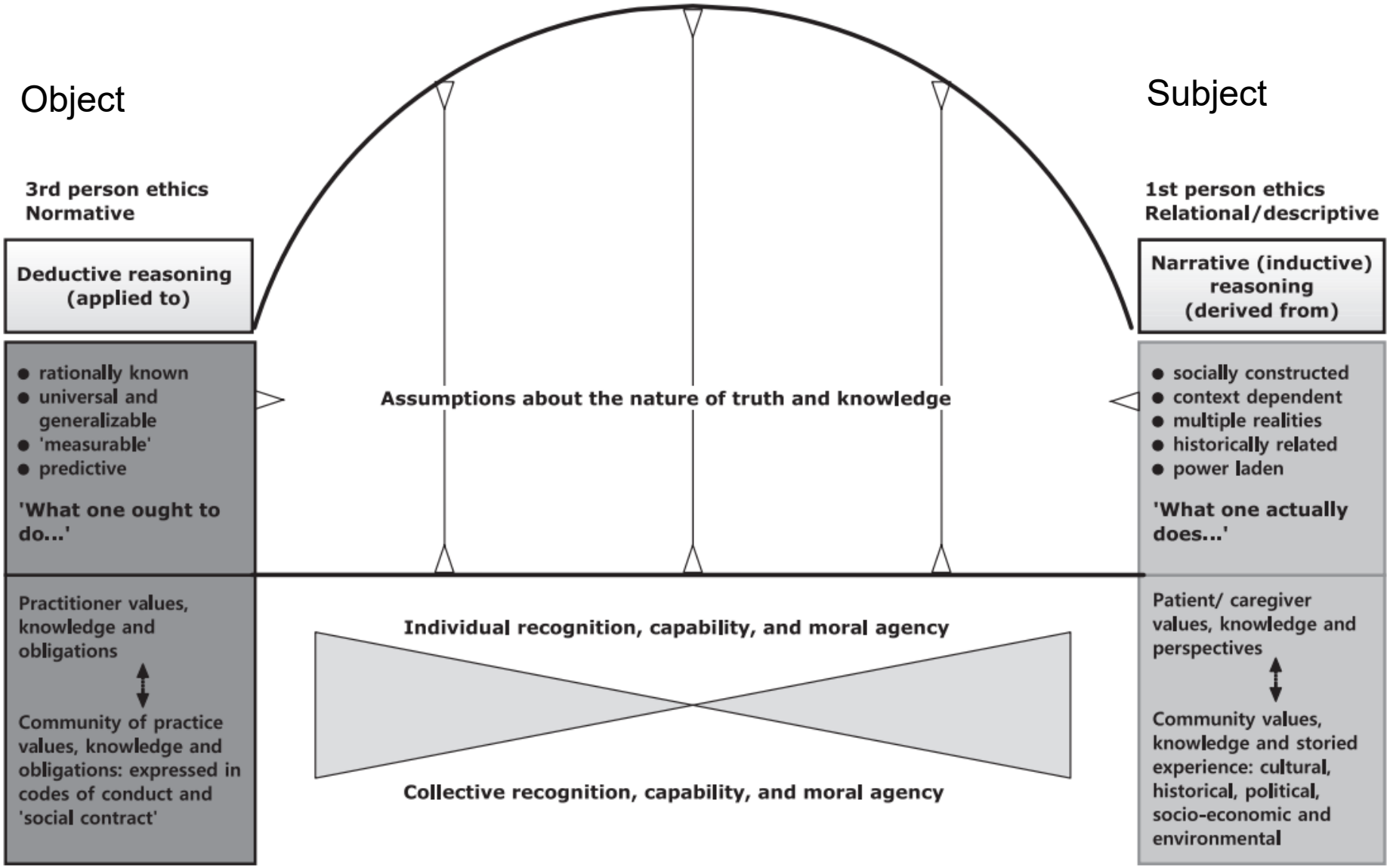
“Hoezo, “ik kan niet…?”

SAXION HOGESCHOOL

“Niet kunnen”

- Geen horizon;
- Geen/ minder mogelijkheden om op betekenisvolle wijze met de wereld om te gaan
- Interactie lichaam/ omgeving
- Sociale normen

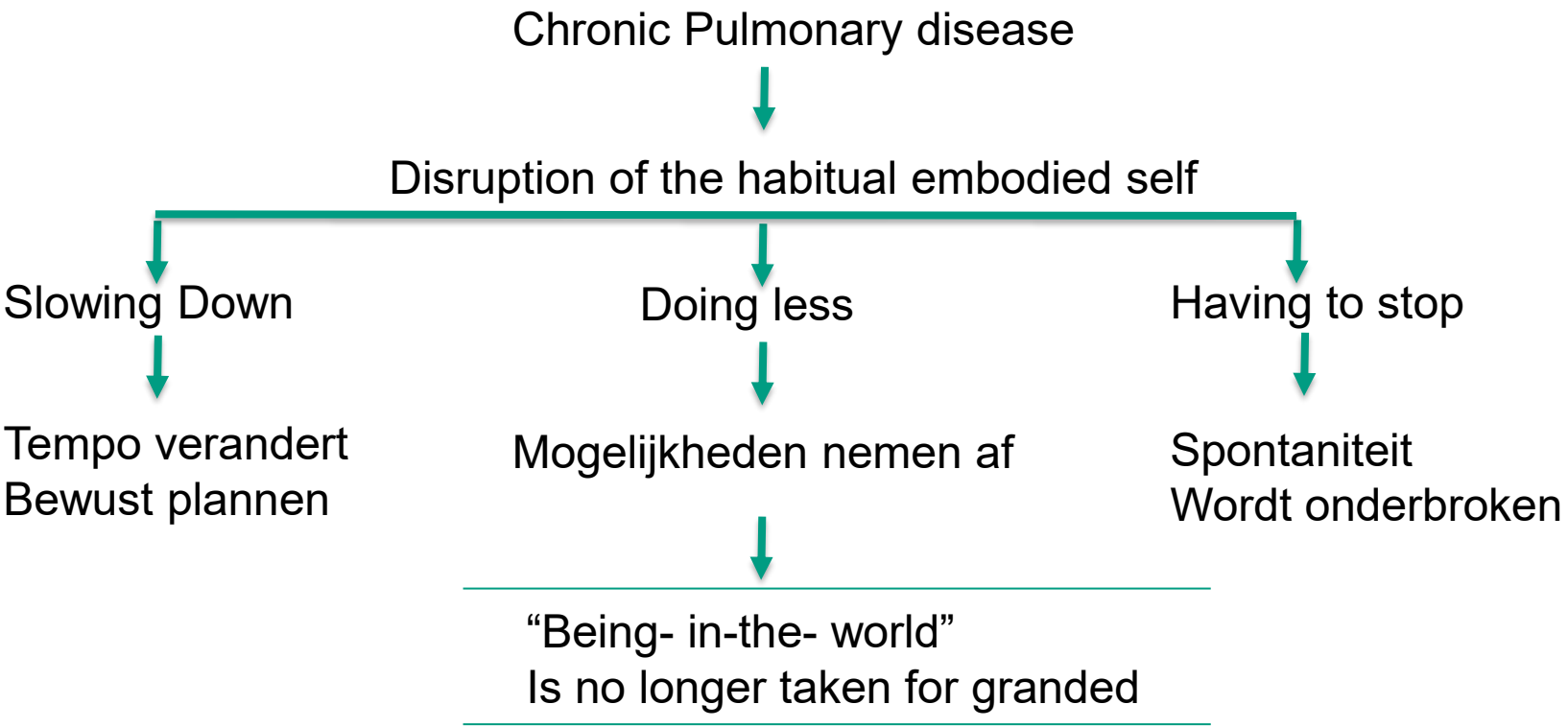




SAXION HOGESCHOOL

Edwards & Jones., 2014 *Pain Medicine*

The body is disrupted



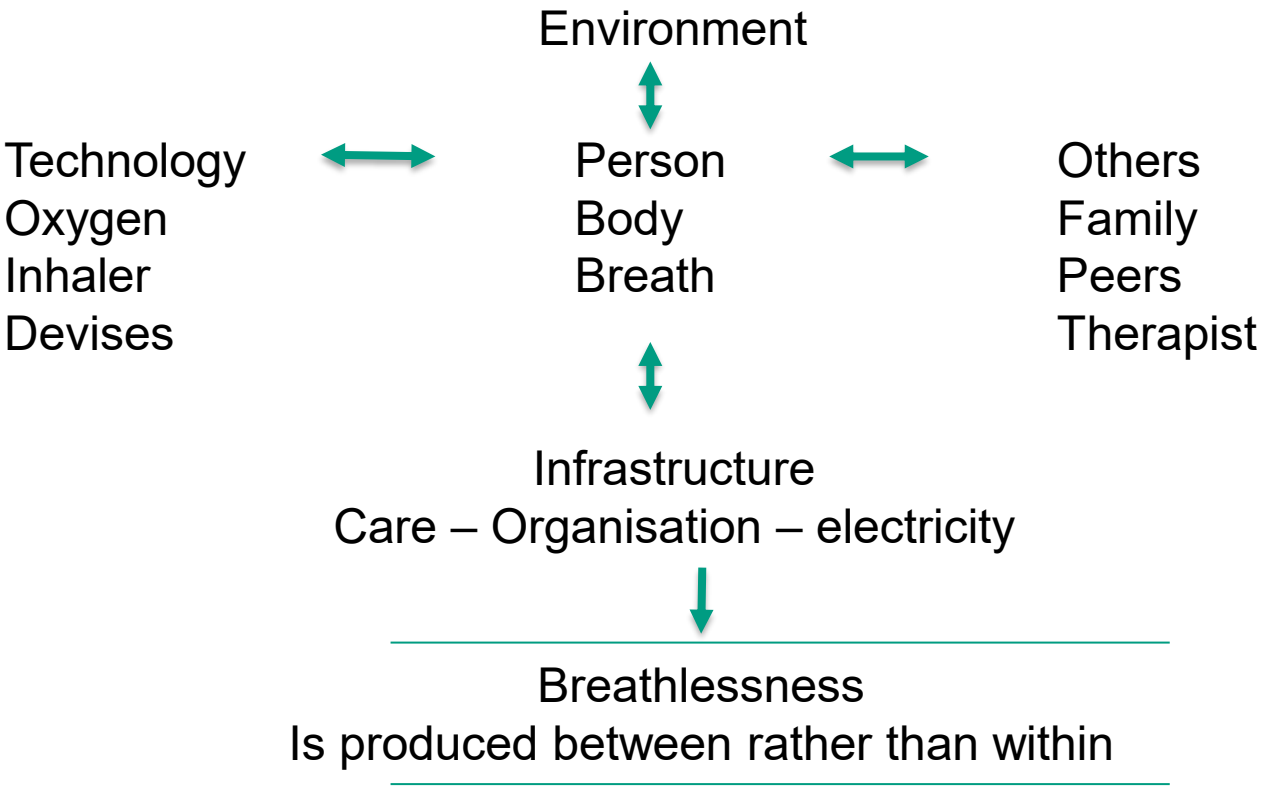
The problem is not only impaired breathing
The illness changes what it means- and what it is possible- to be in the world

"There's so much stuff I would like to be doing … and I just can't do it."

SAXION HOGESCHOOL

Pooler 2014 *Global Qualitative Nursing Research*

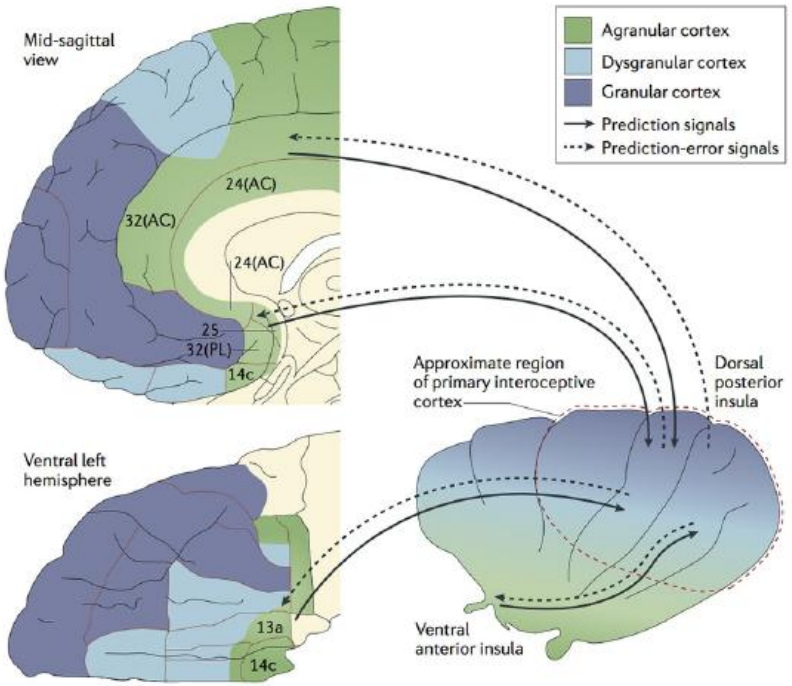
The world is involved

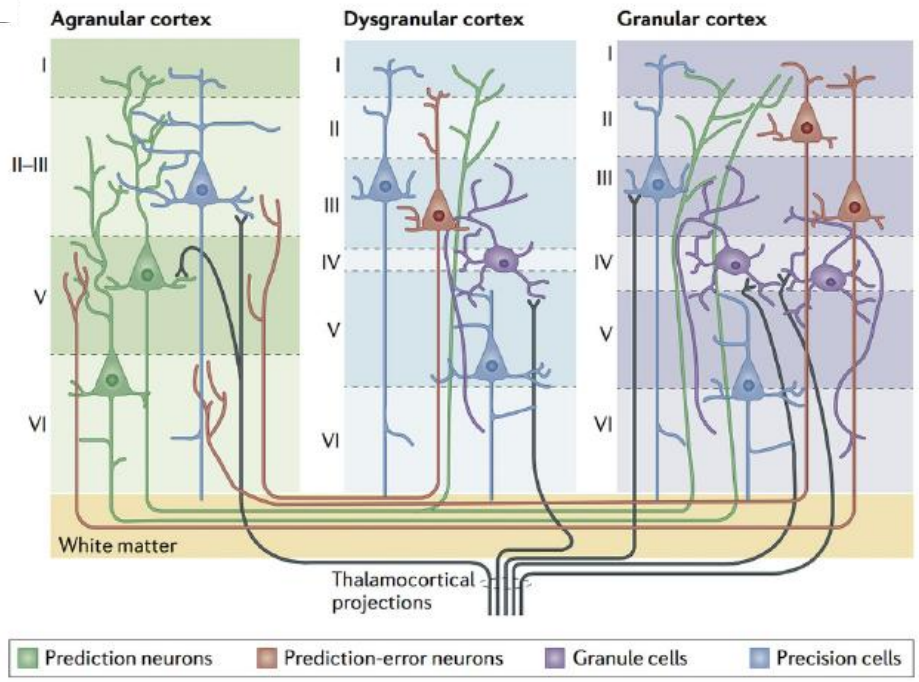


1. Not just a symptom interactie tussen lichaam, technologie, omgeving en sociale context
2. Care is co-produced netwerk van mensen, objecten, ruimtes en infrastucturen
3. Capacity is relational veranded met configuratie van omgeving en middelen

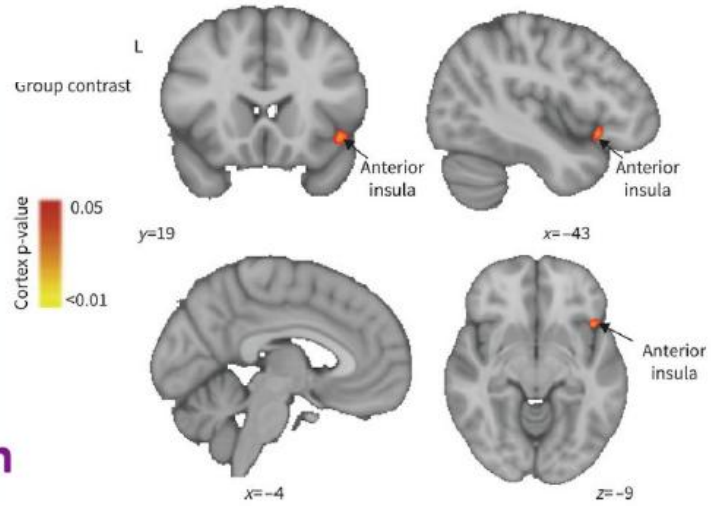
SAXION HOGESCHOOL

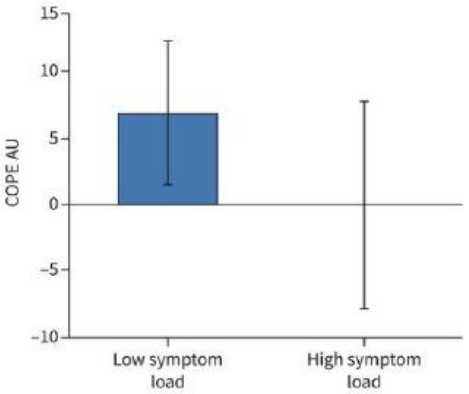
Nyman, 2026 *Journal of Aging Studies*





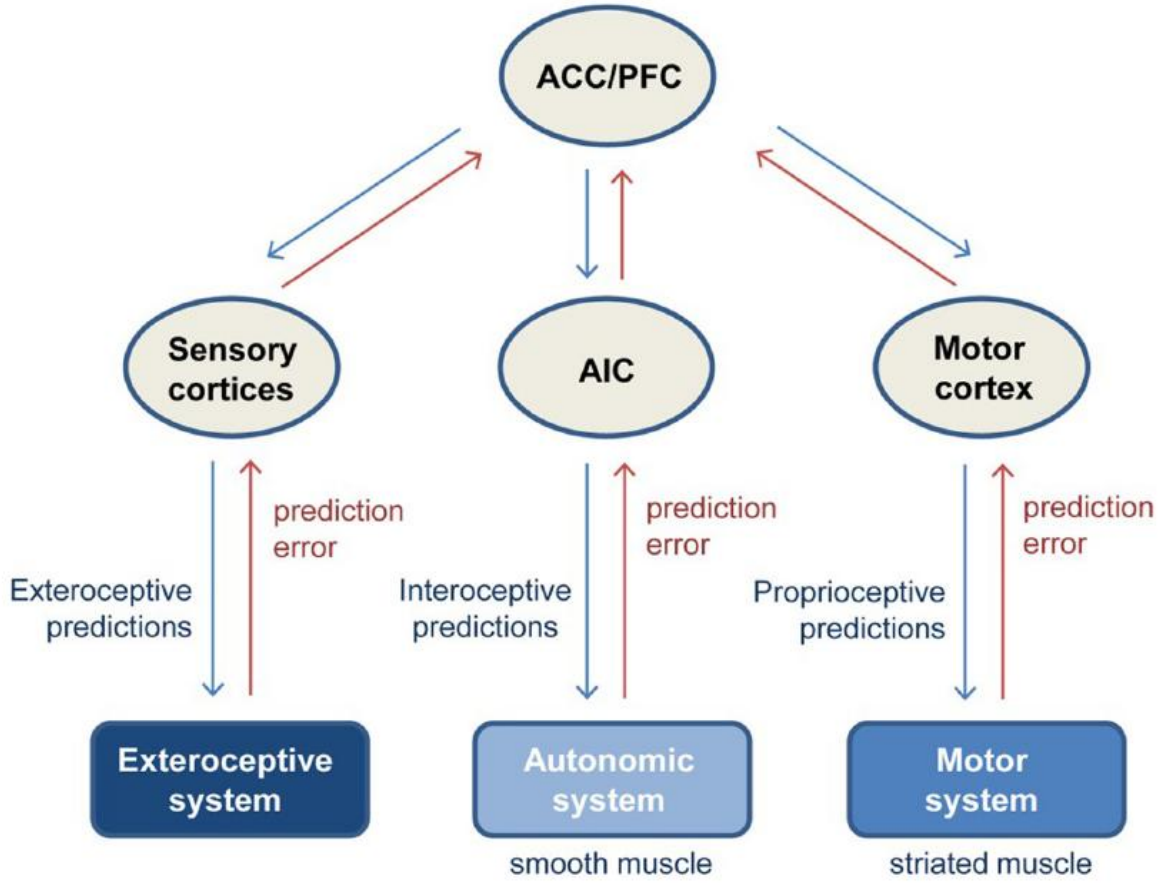






SAXION HOGESCHOOL

Hudson et al. (2025), *Respiratory Physiology & Neurobiology*



"Dyspnea reflects not only what happens in the lungs, but also how the brain predicts, interprets and updates respiratory sensations."

Hudson et al. (2025), *Respiratory Physiology & Neurobiology*

Heartbeat perception in home-based cardiac rehab

Associatie (Multiple regressie) met Δ peak VO_2 (n=100):

- **HTT-score baseline**: **β = 0,372; P < 0,001**
- **Exercise adherence** (trainingsconsistentie): **β = 0,364; P < 0,001**
- **%predicted peak VO_2 baseline**: **β = -0,248; P = 0,002** (lagere uitgangsfit → meer winst)
- Modelsterkte: Adjusted R^2 = 0,478

Interoceptie ↔ gedrag (adherence)

- **HTT-score baseline** correleert met betere **exercise adherence**
- OR = 22,80; 95%CI 2,67–209,00; P = 0,005

> **Interoceptie** lijkt niet alleen “waarnemen”, maar helpt bij:
> **zelfregulatie** van trainingsbelasting (passend doseren)
> **volhouden/participatie** (beter aansluiten op eigen lichaamssignalen)

SAXION HOGESCHOOL

Geneeskundige Ontologisch Debat



Anjum, *Eur J Pers Cent Healthc* 2016

Low, *J Evaulation in Clin Pract* 2016

SAXION HOGESCHOOL

POSITIVIST ONTOLOGY	EBM SCIENTIFIC APPROACH	PCH SCIENTIFIC APPROACH	DISPOSITIONALIST ONTOLOGY
empiricism	data	theory (mechanism)	metaphysics
reductionism, dualism	biomedical	person-centered	holism
supervenience	bottom-up causation only	top-down causation	emergence, demergence
composition	single disease guidelines	co- and multi-morbidity	complexity
mereology	additive	nonlinear	interaction
regularity	homogeneity	heterogeneity	causal interference
same cause, same effect	mono-causal model	bio-psychosocial model	tendencies
universal laws	universal treatment	medical uniqueness	causal singularism
isolation	idealisation	contextual	context-sensitivity
frequencies	statistical	individual	propensities
from general to particular knowledge	quantitative methods	qualitative methods	from particular to general knowledge

“Take to work” messages

- Een mens hééft niet alleen een lichaam, maar is lichamelijk in de wereld
- Kunnen ontstaat tussen lichaam, ervaring, omgeving en anderen
- Misschien begint herstel waar opnieuw een betekenisvol “ik kan” ontstaan

SAXION HOGESCHOOL