

Patients avec les troubles de conscience

Comment on pense à leur prise en charge

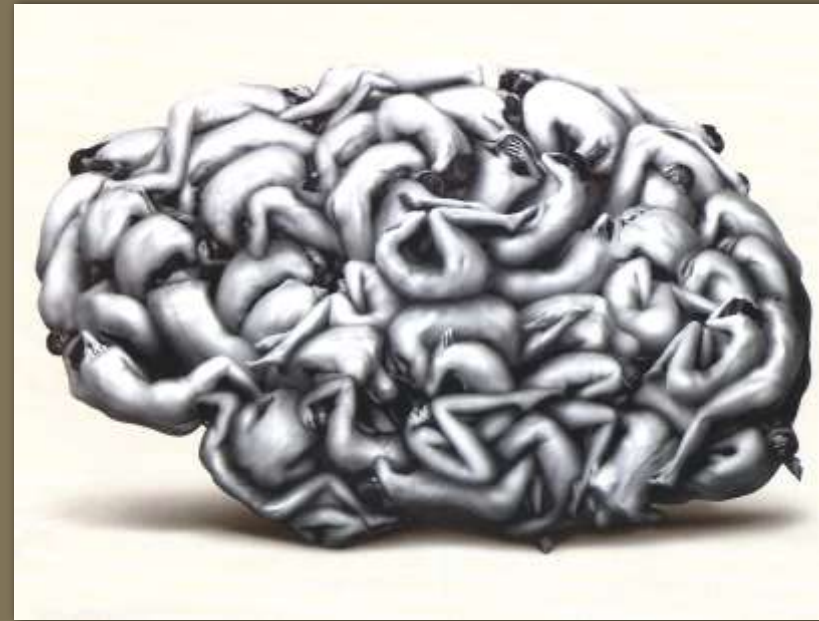
Journée EVC-EPR 2017 L'ETHIQUE

**Centre Ressources Francilien du
Traumatisme Crânien**

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Paris, France

Athena Demertzi, PhD

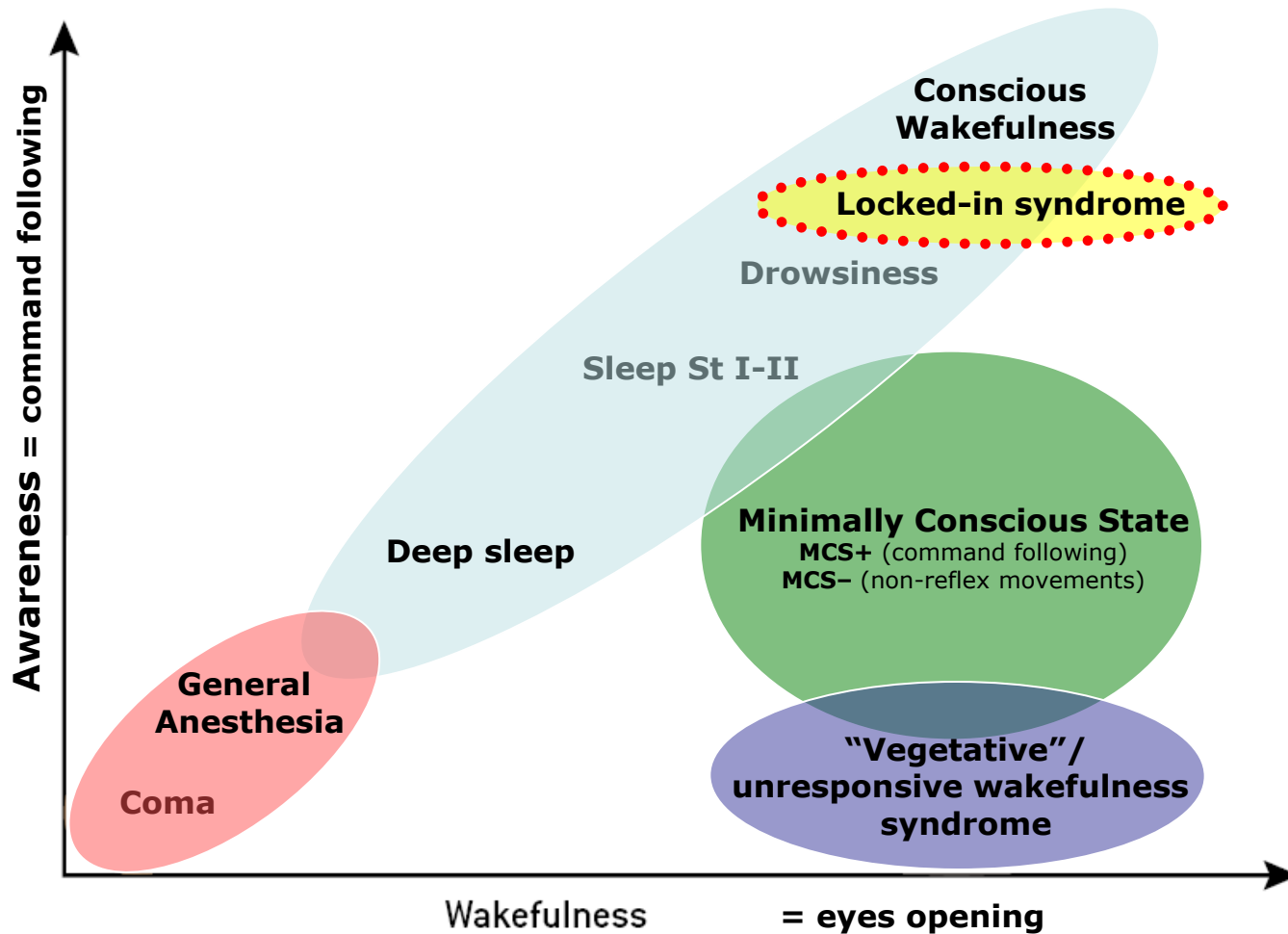
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James S. McDonnell Foundation



Definition clinique de la conscience



From “how we ought to” to “how we think”: Opinions

Procedure

Questionnaire surveys

Scientific conferences and meetings in Europe

Binary outcome: Agree-Disagree

Study 1: Pain perception in DOC (n= 2059)

Study 2: End-of-life in DOC (n=2475)

Study 3: Pain and end-of life in DOC (n=2259)

Statistical Analysis (SPSS v.16)

Chi-square tests

Multiple Logistic Regressions

Profession (medical, paramedical, other)

European region (Northern, Central, Southern)

Religiosity

Gender

Age

Coma and locked-in syndrome - Disorders of consciousness

Age: 0 1 2 3 4 5 6 7 8 9
 Profession: Medical doctor, Nurse/PA, Other
 Gender: Male, Female

QUESTIONS (answer by YES or NO)

1. The word and brain are two separate things
 2. The word is fundamentally physical
 3. Some spiritual part of us survives death
 4. Each of us has a soul which is separate from the body

Do you think that...

5. patients in a vegetative state can feel pain?
 6. patients in a minimally conscious state can feel pain?
 7. patients in a locked-in syndrome can feel pain?
 8. Being in a chronic vegetative state is worse than death...
 9A. for the patient?
 9B. for the family?
 10. Being in a chronic minimally conscious state is worse than being in a vegetative state...
 10A. for the patient?
 10B. for the family?
 11. Being in a chronic locked-in is worse than being in a vegetative state (or in a minimally conscious state)...
 11A. for the patient?
 11B. for the family?

Do you think that...

12. it is acceptable to stop treatment (artificial nutrition and hydration) in patients in chronic vegetative state?
 13. treatment can be stopped in patients in chronic minimally conscious state?
 14. treatment can be stopped in patients in chronic locked-in syndrome?

Would you like to be kept alive if you were in:

15. chronic vegetative state?
 16. chronic minimally conscious state?
 17. chronic locked-in syndrome?

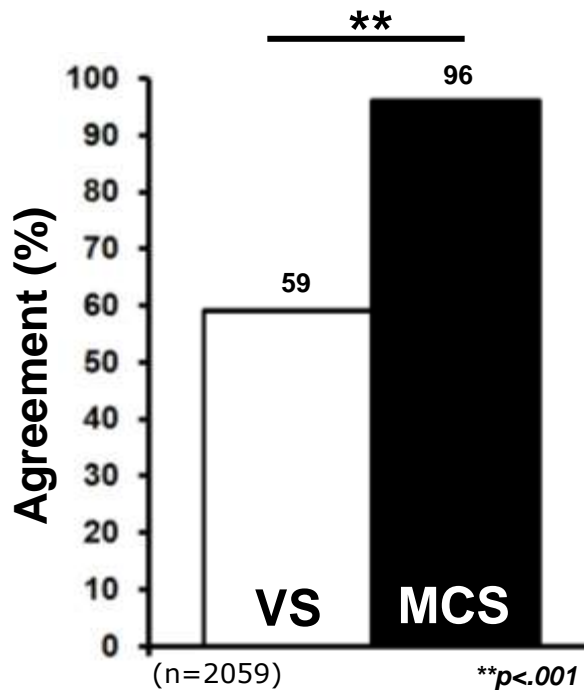
17. On average, my overall quality of life over the last 2 weeks is:
 worst period in my life -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 best period in my life

18. Are you religious? YES NO If yes: Practising? YES NO
 Christian, Islamic, Jewish, Other (CAPITAL LETTERS)
 If yes, what religion? _____

Assessment Systems and e-Solutions Group - <http://www.coma-group.be/> - info@coma-group.be

(1) Attitudes towards pain

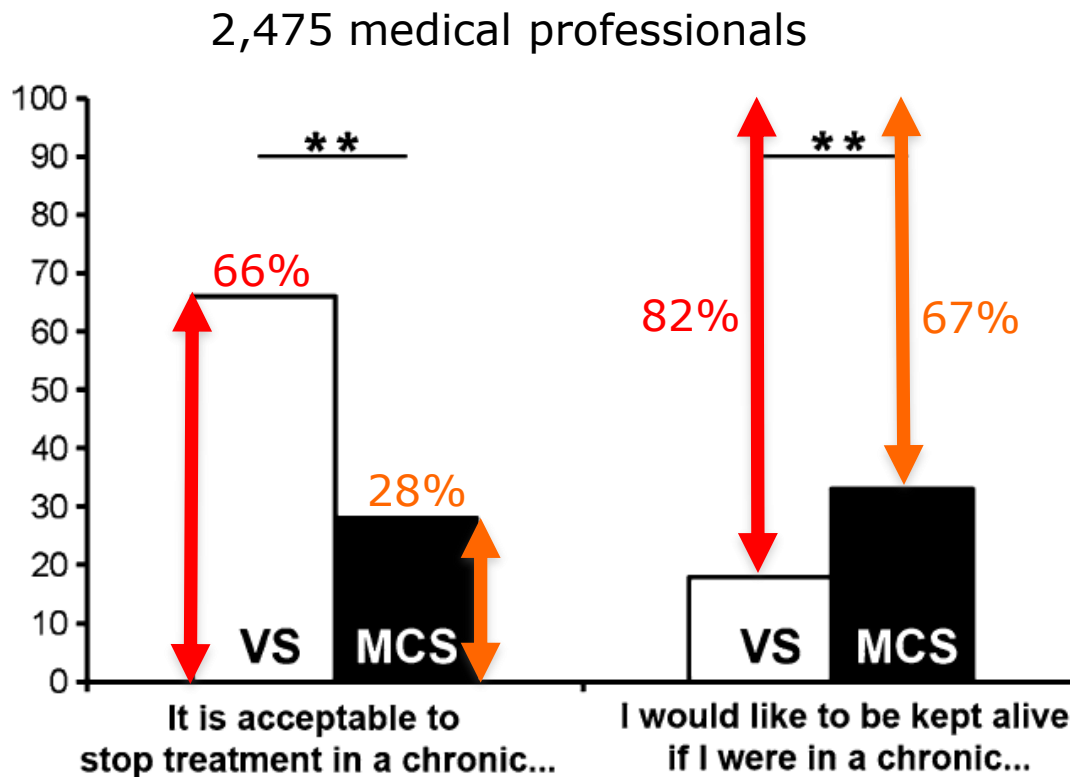
Do you think patients in a ...
can feel pain?



Question Predictors	Odds Ratio	95% Confidence Interval		p value
Do you think VS patients feel pain?				
Age	1.01	1.00	1.02	.050
Women	1.25	.99	1.58	.060
Northern Europe	1.00			
Central Europe	.81	.58	1.14	.240
Southern Europe	1.10	.76	1.60	.600
Paramedical professionals	1.56	1.20	2.00	<.001
Religious respondents	1.37	1.10	1.70	.004
Do you think MCS patients feel pain?				
Women	2.38	1.33	4.26	.003
Religious respondents	1.83	1.05	3.18	.031

Predicted response: "agreement"

(2) Attitudes towards end-of-life



VS is worse than death for

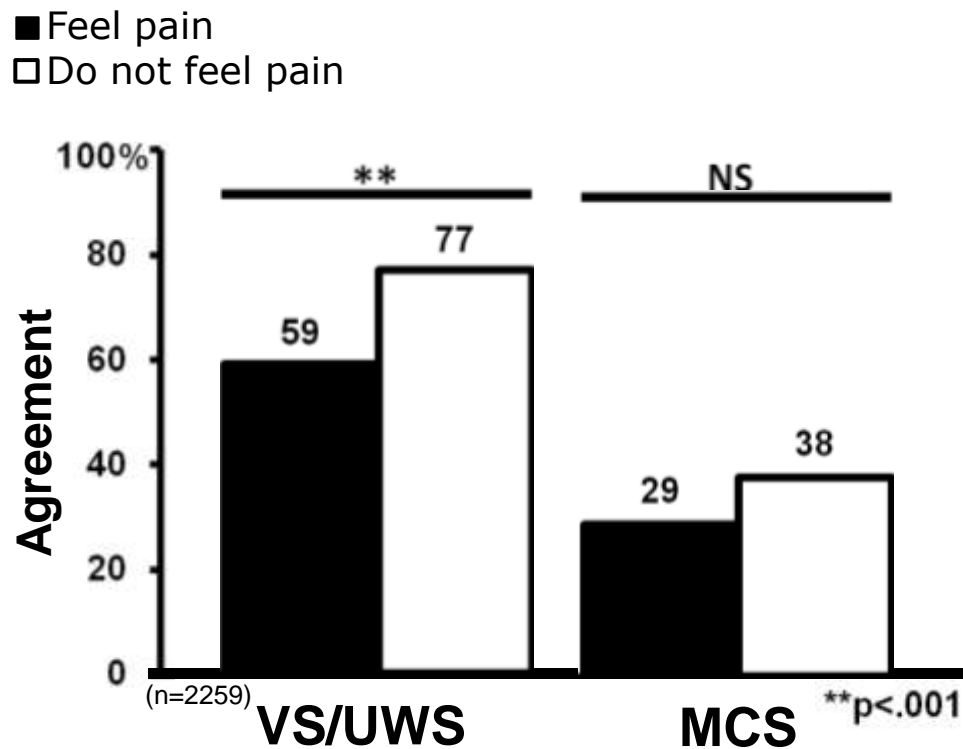
- patients: 55%
- families: 80%

MCS is worse than VS for

- patients: 54%
- families: 42%

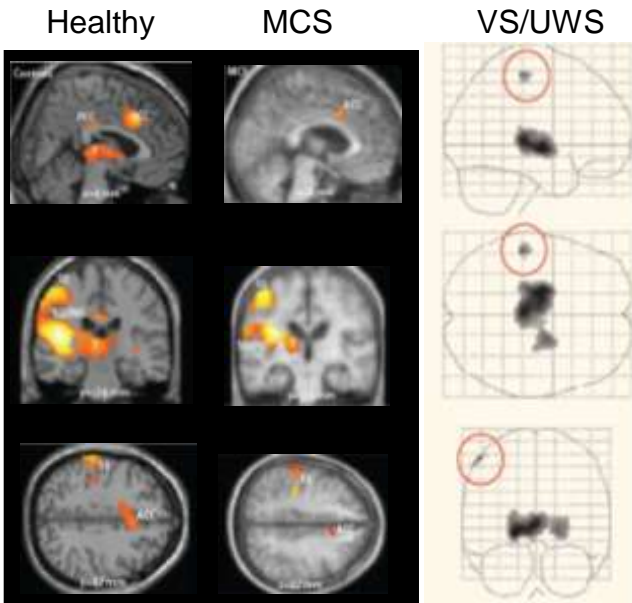
(3) Attitudes towards pain & end-of-life

Treatment can be stopped in chronic...



Neural correlates of awareness?

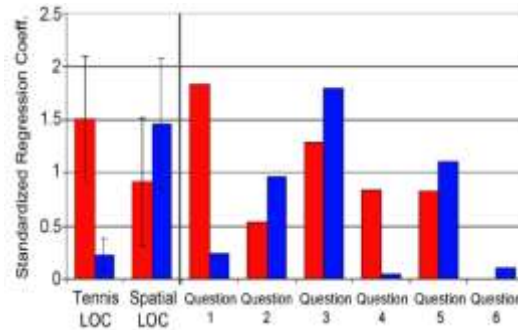
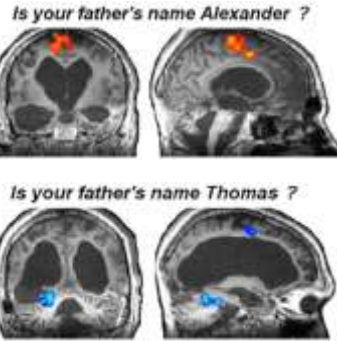
Activation paradigms



Boly et al, Lancet Neurol 2008
Laureys et al, Neuroimage 2002

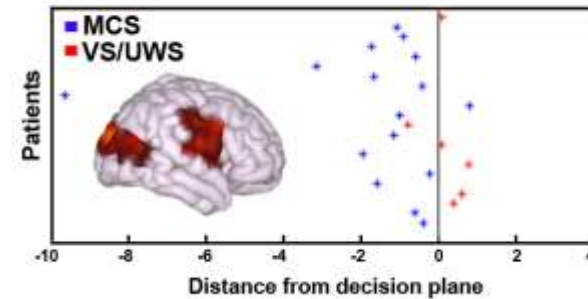
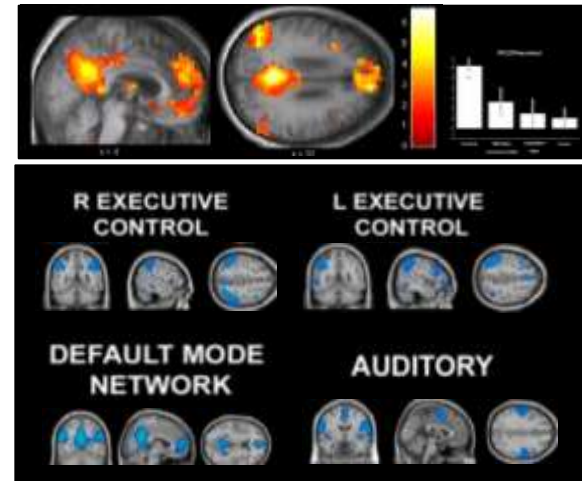
Active paradigms

Imagine **Tennis** to answer 'YES'
Imagine **Navigating** to answer 'NO'



Monti & Vanhaudenhuyse et al, NEJM 2010
Owen et al, Science 2006

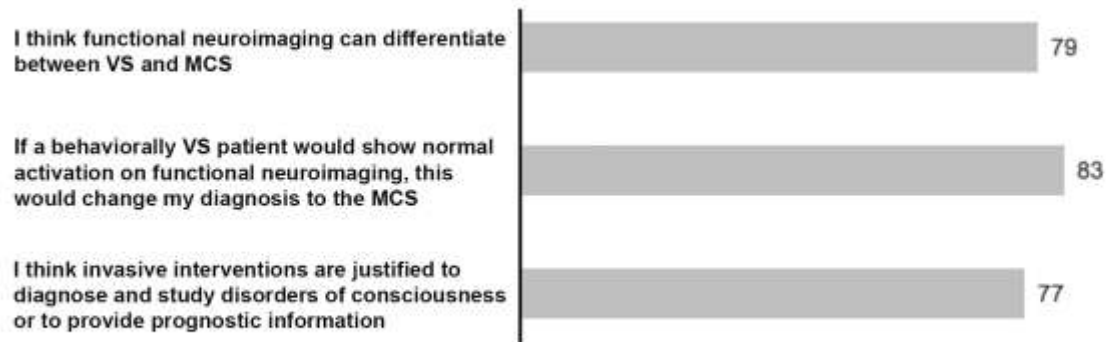
Resting state paradigms



Demertzi & Antonopoulos, Brain in press
Demertzi & Gomez, Cortex 2014
Vanhaudenhuyse et al, Brain 2010

Physicians approve technology

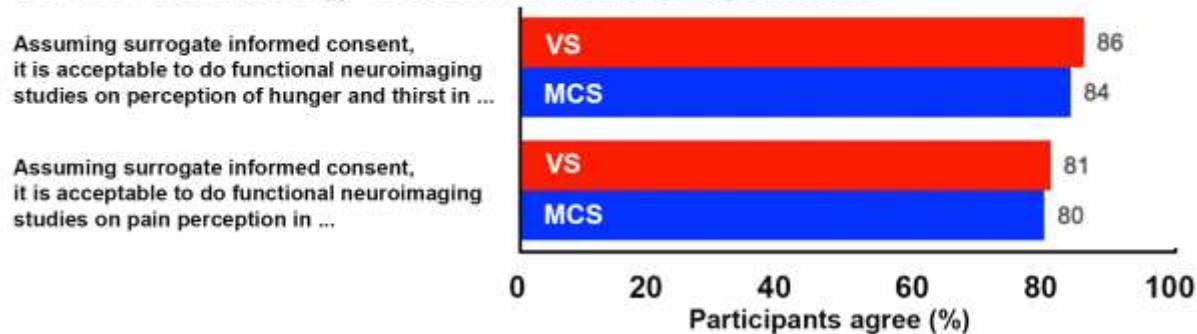
The use of technology to get ancillary information about patients' clinical status



The use of technology to develop treatments



The use of technology to assess conscious experiences



SOCIETY *for*
NEUROSCIENCE

(n=1233)

Que devons-nous aux patients TDC?

- The moral significance of Consciousness
 - ontological understanding: consciousness = personhood = moral agency
 - relational or contextual understanding: patients have value for others
- Legal challenges: responses to critical questions with technology
- Cognitive neuroscience is about brain/mind reading
 - to what degree do we neuroscientists have the right to interfere with a patient's intimacy, such as cognitive contents, in the absence of their consent?
 - in essence, where do we draw the limits of deciphering another person's cognitive content, like dreams, ongoing mentation etc? What is the additive value of it to a societal level?



Thank you!

The departments of
Neurology and Radiology in
Paris and Liège

**...but mostly patients
and their families!**

