

The „immoral patient“

Analyzing the role of brain lesion patients in moral research

Markus Christen (University of Zürich & University of Notre Dame), Marianne Regard (Office of Behavioral Neurology and Neuropsychology, Zürich), Peter Brugger (University Hospital Zürich)

Question

The empirical investigation of human moral behavior is increasingly based on studies that include patients with rare lesions in specific regions of the frontal lobe. This poses two questions from the perspectives of neuroethics and medical ethics:

What is the role of such findings for our understanding of human morality?

And how should we deal with such patients in research and clinical practice?

Methods

Embase, Francis, Medline, Proquest, PsychINFO, Web of science

Standardized search strings & elimination of duplicates

~3'300

Elimination via title analysis

~530

Qualitative selection based on abstract & full-text

169

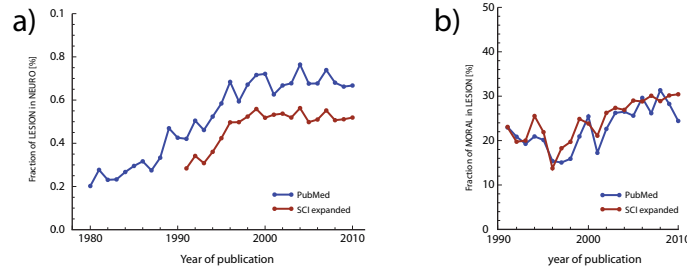
Bibliometric and scientometric analysis of patient studies on connections between brain lesions and human social behavior.

More than 40 years of neuropsychological experience (M. Regard).

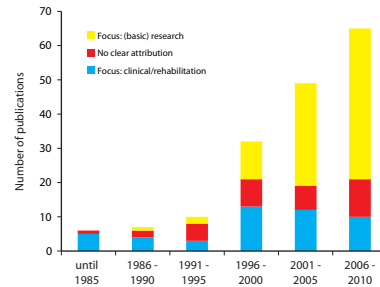
Clinical records of the neuropsychology unit of the University Hospital Zürich.

Interviews with medical experts involved with treatment of frontal lesion patients.

Annual number of (moral) lesion publications (scaled)



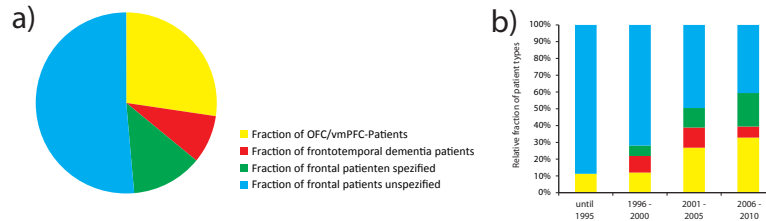
Focus of moral lesion literature



Impact of moral lesion literature

	Typical „Phineas Gage“	Untypical „Phineas Gage“
Mean annual citations per publication	11.22	3.05
Mean annual citations per publication (excluding Tukey outliers)	7.61	1.85

Typology of frontal patients



Reference: Christen M, Regard M (in press): Der „unmoralische Patient“. Analyse der Nutzung hirnerkrankter Menschen in der Moralforschung, Nervenheilkunde.

Main results

Recent studies in moral research using frontal lobe patients promote a neurodeterminism of human moral behavior that is insufficiently supported by the current state of knowledge.

There is a shift in research away from clinical issues towards basic research on human morality that is notable, as the day-to-day handling of neuropsychological patients is challenging and furthermore demonstrates constraints of classical principles of medical ethics like autonomy and benevolence.

Recommendations

Clinical documentation of lesion patients has to clarify whether behavioral symptoms are primarily lesion-associated or/and reactive.

Studies are required to evaluate the prevalence of changes in moral behavior resulting from a frontal lesion, i.e. the number of patients without obvious behavioral symptoms despite a critical lesion site will have to be considered.

As studies that claim a close relation between frontal brain lesions and changes in moral behavior are much more often cited compared to studies that discuss the complexity of the effects of such lesions, the impact of this discrepancy on our theoretical understanding of human morality should be investigated critically.

Basic notions of medical ethics, in particular the principle of autonomy, should be developed further by including the knowledge of the complexity of frontal lesions with respect to social behavior.