Priorities for Psychiatry: The Point of View of the Psychiatrist

Perspective of the European Psychiatric Association

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Düsseldorf, Germany

Outline

- Psychiatry in the context of the neuro-disciplines
- Current research topics and funding for psychiatry
- Reinforcing interactions between scientists, clinicians and society in brain research
- Summary and conclusions

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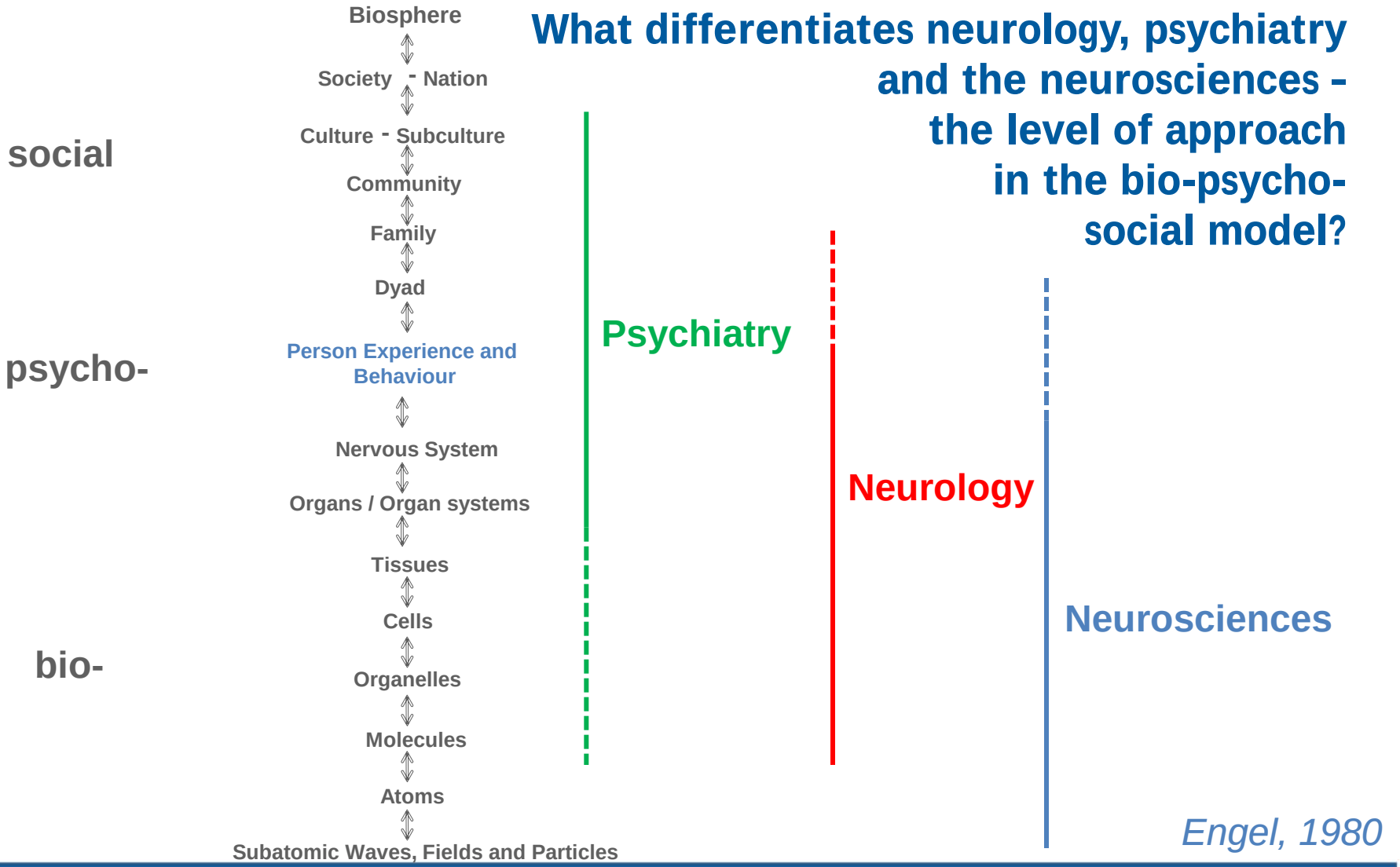
Psychiatry, neurology, neurosciences – overlaps and distinctions

Area	Neurology	Psychiatry	Neurosciences
Medical specialty	Yes	Yes	No
Clinical overlap disorders (examples)	Neurodegenerative disorders Mood, anxiety and psychotic symptoms in brain disorders		Interested in physiologic and pathologic processes in central and peripheral nervous tissue
Clinical unique areas (examples)	Peripheral neuropathies Myopathies	Schizophrenia Addiction Eating disorders	
Concept	'Organic' CNS and PNS affliction	Biopsychosocial concept	'Organic' CNS and PNS affliction
Focus of treatment	Drugs, neurostimulation, immunomodulation, rehabilitation	Drugs, psychotherapy, sociotherapy, ECT, TMS, rehabilitation	Not applicable
Focus of research methods	RCT, single case studies, experimental	RCT, experimental	Experimental studies

What differentiates neurology, psychiatry and the neurosciences – the level of approach in the bio-psycho-social model?



Engel, 1980

Commonalities and differences – towards a joint approach

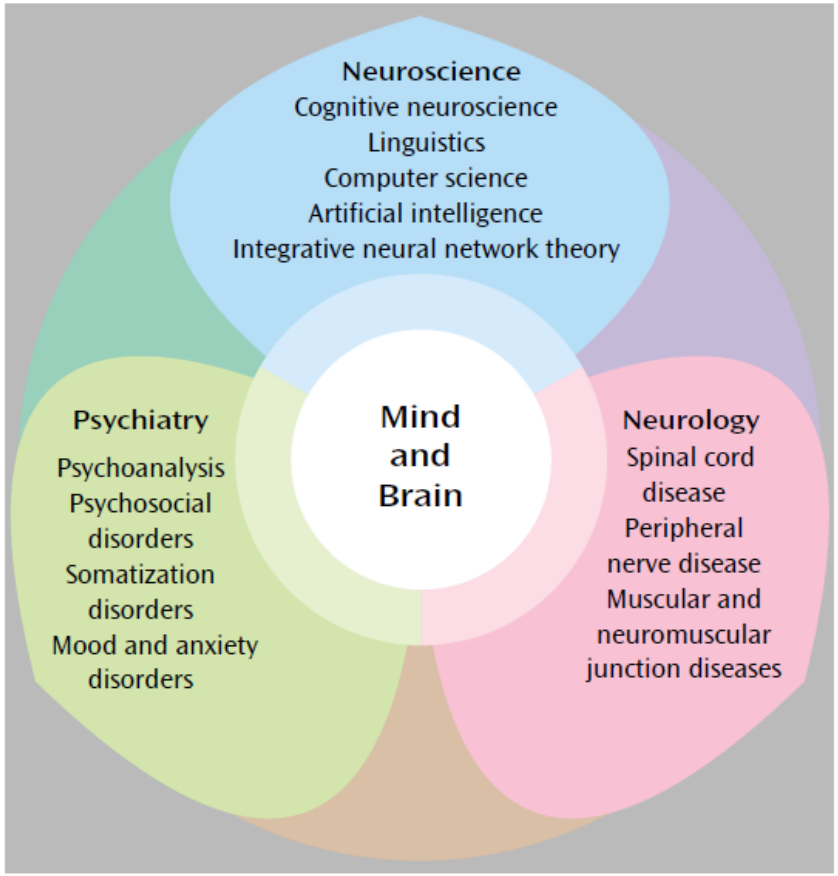


FIGURE 1. The Relationship of Neuroscience, Neurology, and Psychiatry and Their Subtopics to Mind and Brain

Conclusions: Neurology and psychiatry have, for much of the past century, been separated by an *artificial wall* created by the divergence of their philosophical approaches and research and treatment methods. Scientific advances in recent decades have made it clear that *this separation is arbitrary and counterproductive*. Neurologic and psychiatric research are moving closer together in the tools they use, the questions they ask, and the theoretical frameworks they employ. *The interests of neurology and psychiatry converge within the framework of modern neuroscience*. Further progress in understanding brain diseases and behavior demands fuller collaboration and integration of these fields. Leaders in academic medicine and science must work to break down the barriers between disciplines.

Martin JB , Am J Psychiatr 2002; 159: 695-704

Approaching Mental Disorders

Brain etiopathogenetic factors	Psychological etiopathogenetic factors	Socioenvironmental etiopathogenetic factors
Examples:	**Examples:**	**Examples:**
Genetic vulnerability Neurodegeneration Dysconnectivity	Dysfunctional coping Aberrant salience Jumping to conclusions Cognitive biases	Urban upbringing Childhood trauma Toxins

Social cognition

Epigenetic dysregulation

Environmental and social factors become neurobiological

- Emigration-associated neural stress

  Akdeniz et al., JAMA Psychiatry 2014; 71: 672-680

- Urban upbringing associated with decreased gray matter volume in DLPFC

  Haddad et al., Schizophr Bull 2015; 41: 115-122

- Late cognitive consequences of uterine infections (animal models only) and other adverse life events

  Meyer U, Biol Psychiatr 2014; 75: 307-315

  Haddad et al., Schizophr Bull 2015; 41: 115-122

- Epigenetic dysregulation

  Pishva et al., Soc Psychiatry Psychiatr Epidemiol 2014; 49: 337-348

What are the emerging new fields in psychiatry?

- Elucidating the neurobiological underpinnings of mental disorders
- Identifying neurobiological mechanisms of psychosocial factors of mental disorders
- Using GWAS and neuroimaging data for individual prediction of disease development
- 'Finding' new psychopharmacologic agents
- Standardising psychotherapy

Neurology, Psychiatry and the Neurosciences 2025: An Outlook

- A clinical and research coalition Neurology-Psychiatry-Neurosciences may be warranted for 'brain disorders'
- Increased clinical collaboration (liaison services, neuropsychiatry wards) is warranted
- Fighting together stigma and discrimination of brain/mental disorders
- Integrate neuroscience as the joint basis for research approaches including 'social neurosciences' in neurology and psychiatry curricula
- Joint neuropsychiatry training programs in medical school and specialty training programs
- Optimize neuroscience training for psychiatry residents
- Neurology may become an element of the future 'common trunk' of psychiatric subspecialties and vice versa (or common trunk 'neuropsychiatry'?)

Center for Neurology and Neuropsychiatry

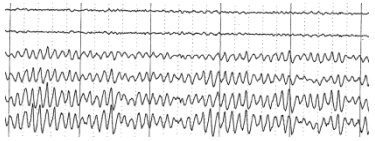
A Center of the LVR-Klinikum Düsseldorf and the Universitätsklinikum Düsseldorf
(Directors: Univ.-Prof. Dr. med. W. Gaebel, Univ.-Prof. Dr. med. H.P. Hartung)

Department of Neurology
LVR-Klinikum Düsseldorf
(Medical Director: Univ.-Prof. Dr. med. W. Gaebel)
under medical direction of the
Department of Neurology of the
Universitätsklinikum Düsseldorf
(Director: Univ.-Prof. Dr. med. H.-P. Hartung)

Neurologists
- 24/7 Emergency Admission
- 36 beds
- Stroke services
- Epilepsy diagnostics

Division of Neuropsychiatry
Department of Psychiatry
LVR-Klinikum Düsseldorf
(Director: Univ.-Prof. Dr. med. W. Gaebel)

Psychiatrists and psychologists
- Neuropsychiatric screening
- Neurophysiology (EEG, evoked potentials, video EEG)
- Neuropsychology
- Psychiatric counselling service
- Neuropsychiatric therapy



Cardiological Diagnostics
(Director: Univ.-Prof. Dr. med. M. Kelm)

Specialist in cardiology present
for cardiac ultrasound

Neuroradiological Diagnostics
(Director: Univ.-Prof. Dr. med. G. Antoch)

1.5 T MRT, specialists in neuroradiology

How does the psychiatrist see psychiatry in 10 years?

- Mental healthcare is provided for all European citizens
- Mental healthcare is more focused on prevention and early detection
- Psychiatry is providing high-quality mental healthcare and excellent research opportunities
- Psychiatric research questions play an important role in the neurosciences
- Research in psychiatry is equally well funded as research for other highly prevalent and burdensome disorders
- Somatic and mental healthcare are better linked with each other

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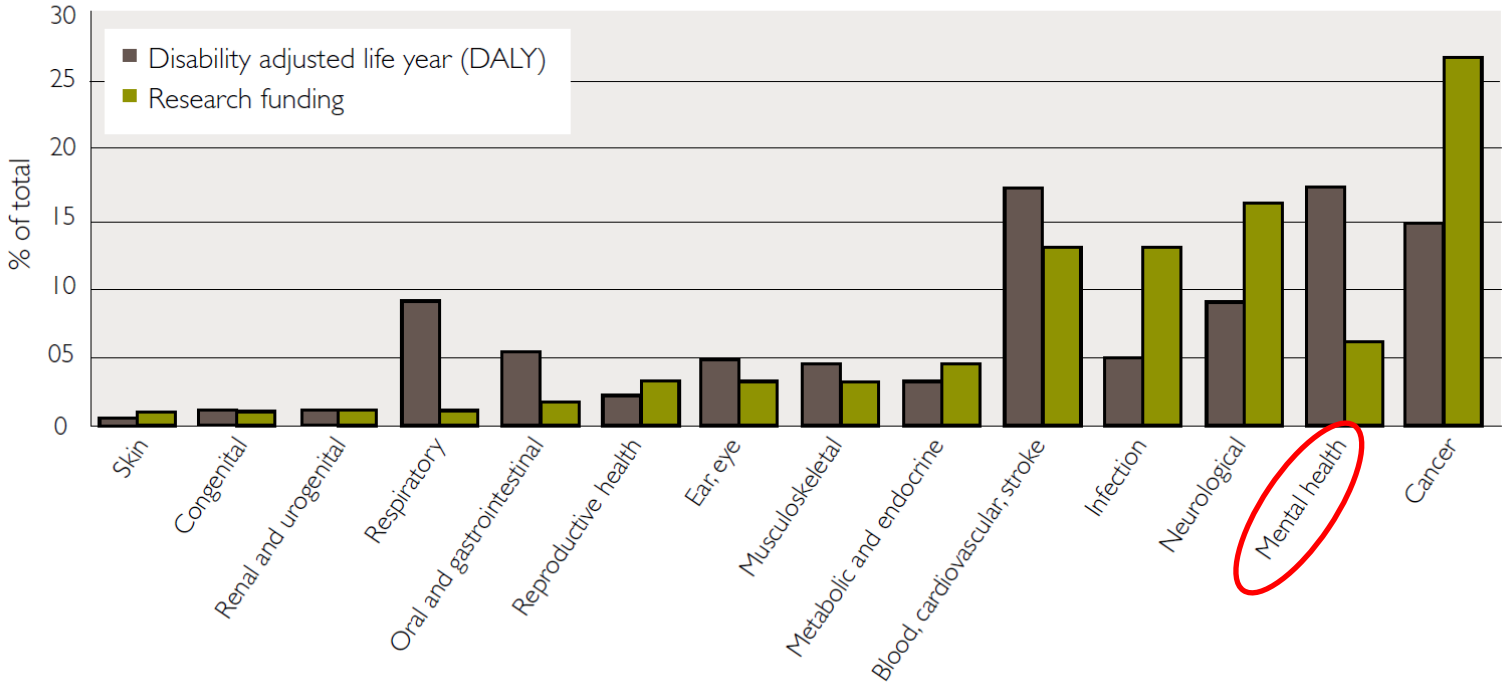
ROAMER: Six research priorities for policy action in mental health and well-being research

- Research into mental disorder prevention, mental health promotion, and interventions in children, adolescents, and young adults
- Focus on the development and causal mechanisms of mental health symptoms, syndromes, and wellbeing across the lifespan (including older populations)
- Develop and maintain international and interdisciplinary research networks and shared databases
- Develop and implement better interventions using new scientific and technological advances
- Reduce stigma and empower service users and carers in decisions about mental health research
- Establish health-systems and social-systems research that addresses quality of care and takes into account sociocultural and socioeconomic contexts and approaches

Wykes et al., Lancet Psychiatr 2015; Sept 22; doi:10.1016/S2215-0366(15)00332-6

DALYs and research funding in mental health

Figure 1: Funding for UK research in 2004/05 by disease area and disability adjusted life year (DALY)
(Kingdon D, 2006. BMJ, 332, p1510)

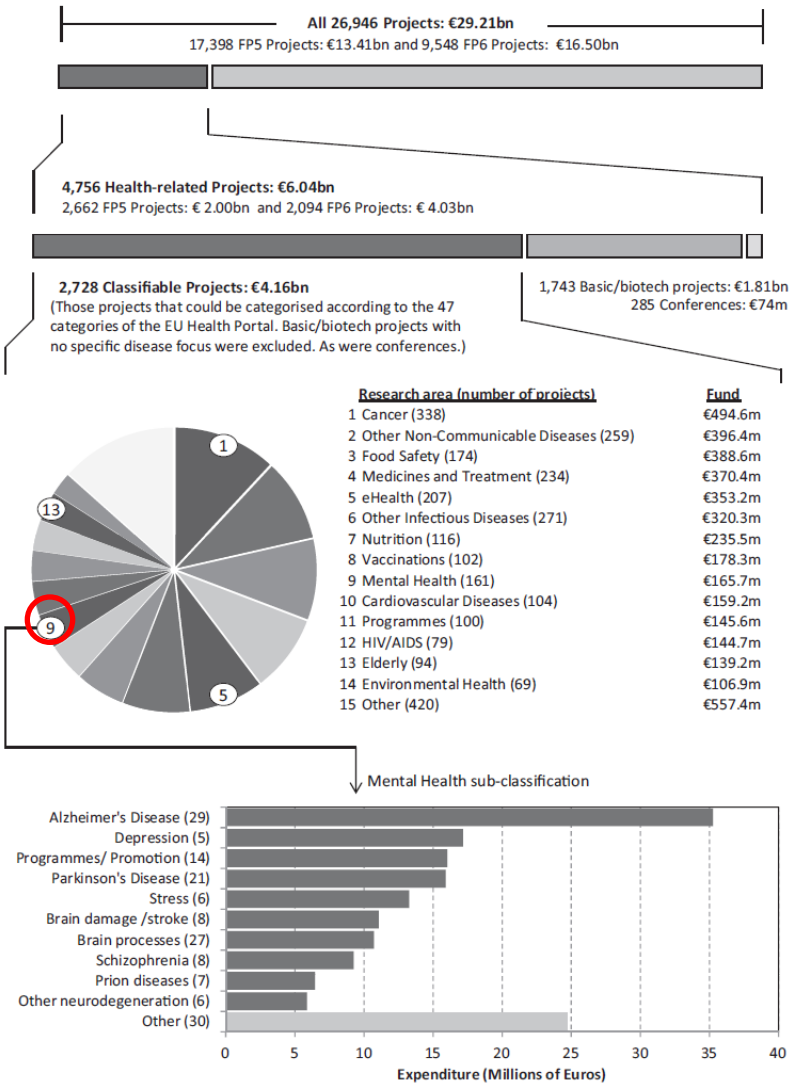


European Journal of Public Health, Vol. 24, No. 3, 514–520

doi:10.1093/eurpub/ckt075 Advance Access published on 25 June 2013

An analysis of subject areas and country participation for all health-related projects in the EU's FP5 and FP6 programmes

Michael J. Galsworthy[1,2], Rachel Irwin[3], Kate Charlesworth[4], Kelly Ernst[5], Dimitar Hristovski[6], Matthias Wismar[5], Martin McKee[4,5]



Method

Classification of all FP5 and FP6 projects by 10 PhD-level coders into 47 categories of the EU Health Portal

Methodological limitations

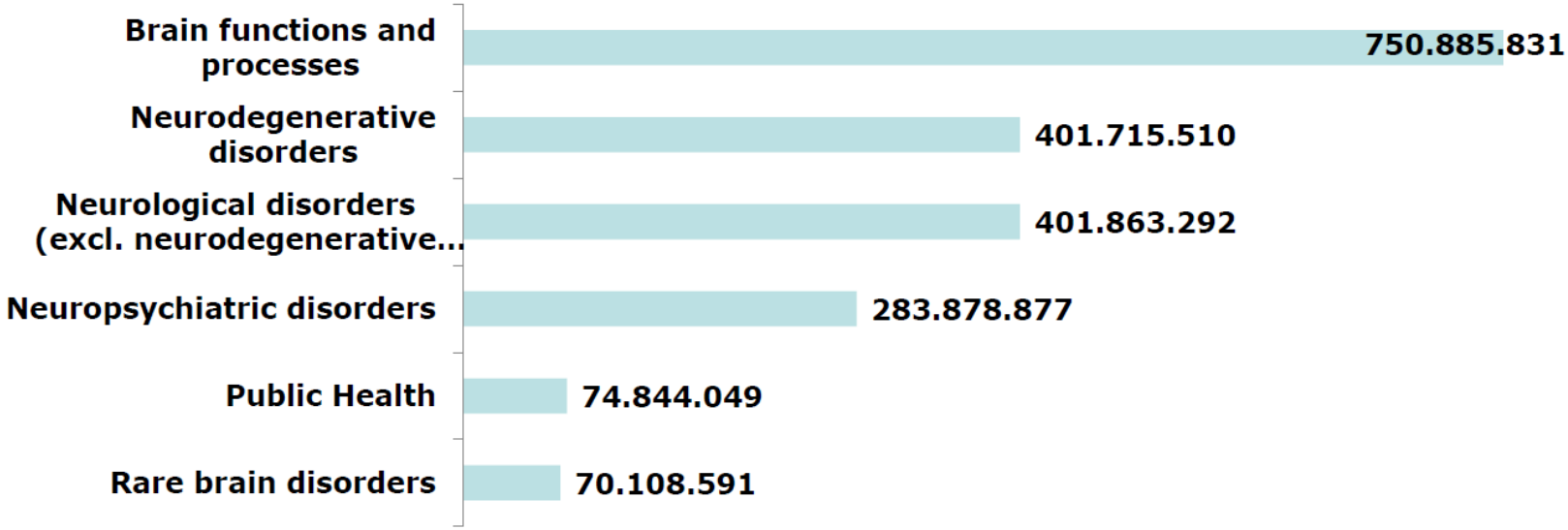
- Classification of many projects into the selected research areas was not possible
- Many projects were basic science projects
- Many projects transgressed the chosen boundaries of research areas
- Neurological disorders and “brain processes” were classified as mental health projects

Main results concerning mental health research

1. Among the non-communicable diseases, mental health ranked ninth
2. The share of funding was 4% of all “classifiable projects” and 2.8% of all health-related projects
3. Among the mental disorders, Alzheimer´s disease-related projects were highest in number and received most of the funding

“Transparency offers the opportunity for scientists to engage in policy discussion and to critique funding priorities. This opens to a wider audience the question of whether funding should be driven by economic burden of disease, potential for cost-effective treatment, the number of researchers interested in the area, patient group lobbying or other factors.”

FP7 funding support for brain including mental health research (2007–2012)



A variety of tools: Collaborative research, ERCEA, Marie Curie, IMI, ARTEMIS

B. Kerstiens, „EU funded brain and mental health research“
http://gamian.eu/wp-content/uploads/2015/01/IG-20150120-B-Kerstiens.pdf

Horizon 2020 funding of mental health related projects (1)

Search terms (Jan 7, 2016):
psychiatry, mental, mental health, mental disorder, schizophrenia, depression, anxiety, alcohol, nicotine, Alzheimer

Country (consortium leader)	Title	Funding (EU contribution)
Germany	Integrating technology into mental health care delivery in Europe	4.9 mio€
Spain	Virtual reality based evaluation of mental disorders	50 T€
Germany	Chronic stress biomarkers for early detection and prevention of burnout	50T€
Spain	A new brain-dedicated PET system to identify beta-amyloid biomarker for the early diagnosis of Alzheimer´s disease and other causes of cognitive decline	50T€
Netherlands	Effectiveness evaluation of traditional and third wave Emotion Regulation strategies in clinical and non-clinical youth population	178 T€
Spain	Mobile therapeutic attention for patients with treatment resistant schizophrenia	4.0 mio€

http://cordis.europa.eu/search/result_en?q=mental

Horizon 2020 funding of mental health related projects (2)

Search terms (Jan 7, 2016):
psychiatry, mental, mental health, mental disorder, schizophrenia, depression, anxiety, alcohol, nicotine, Alzheimer

Country (consortium leader)	Title	Funding (EU contribution)
Italy	Neural and behavioural underpinnings of contextual modulations in autism	180 T€
UK	Pathologies of temporality. Abnormal experiences of time in mental disorders	98 T€
France	Development of pregnenolone derivatives as allosteric inhibitors of CB1 cannabinoid receptors for the treatment of schizophrenia and psychotic syndromes	150 T€
Spain	A precision, computer-vision measurement system for the early diagnosis of schizophrenia	50 TE
Italy	Early detector of comorbid depression	50 T€
UK	Predicting response to depression treatment	50 T€

http://cordis.europa.eu/search/result_en?q=mental

Mental Disorders as Topics in ERANET Transnational Calls

Year	Overall call topic	Mental disorders as topics*
2008	Neurodegeneration	2/12 consortia
2009	Technology development	2/10 consortia
2010	Mental disorders	11/11 consortia
2011	Cerebrovascular diseases	2/10 consortia
2012	Novel methods	4/11 consortia
2013	Mental disorders	13/13 consortia
2014	Neuroinflammation	1/10 consortia
2015	Neuroethics	Under negotiation
2015	Neurodevelopmental disorders	Under negotiation

* Broadly defined as consortia dealing with explicitly named mental disorders, consortia dealing with cognitive impairments and consortia about Alzheimer´s disease
Total number of consortia: n = 77
Number of consortia including studies about mental disorders: 35 (45%)

http://www.neuron-eranet.eu/en/220.php

Examples of ERANET-Neuron funded mental health projects

Funded transnational research consortia of the 6th Joint Translational Call on Mental Disorders (ERA-NET Neuron Newsletter March 2014)

- Novel molecular markers and pathways of anxiety disorders
- Role of genetic polymorphisms in drug metabolizing cytochrome P450 enzymes expressed in the brain for affective disorders
- Discovering risk factors for neuropsychiatric disorders and their consequences using dogs, humans and mice
- VGLUT3 and vulnerability to addiction
- Cocaine addiction: a translational study to identify and characterize dysfunctional neural networks
- Hyperforin analogues, zinc and TRP6 channels - a new antidepressant concept?
- Role of inflammation and related processes in the development, phenomenology and treatment of depression
- Biological mechanisms of transgenerational transmission of early life stress
- Molecular mechanisms of brain function in mTOR-deficient intellectual disability syndromes
- Development of feedback-controlled neuromodulation strategies for the treatment of intractable repetitive hyperkinetic movement disorders
- The role of TAO2 in brain connectivity and autism spectrum disorders
- Uncertainty monitoring vs. inhibition of action in obsessive-compulsive disorder: role of the subthalamic nucleus and effects of stimulation in humans and rodents

http://www.neuron-eranet.eu/en.505.php

ERA-NET NEURON Strategic Research Agenda Feedback

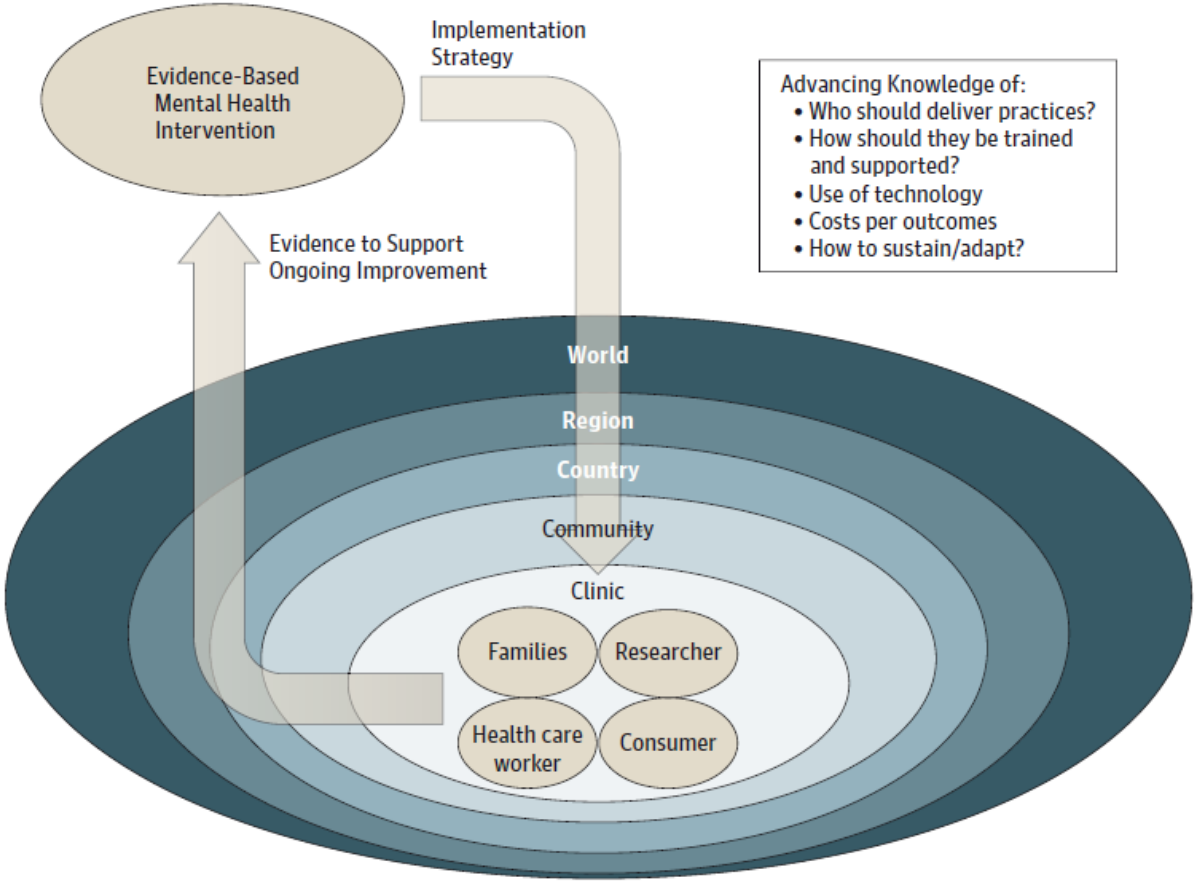
Specific priorities and challenges

- „Not enough emphasis onto social sciences and organisation to care“
- „Social burden on families and carers a neglected issue“
- „Not enough emphasis given to the social context“
- „Pure biological mechanistic and reductionist accounts of mental diseases“

Mental health research – too biological and underfunded?

- There is a lack of exact figures about funding for mental health research in Europe
- An intrinsic difficulty lies in the designation of some research projects, which cross traditional boundaries between basic neuroscience research and specialty- or disorder-specific research
- A challenge will be to define the balance regarding fund allocation regarding research topics, countries and research methods
- For psychiatry, neuroscience research offers a longterm opportunity for progress, but in between, mental healthcare research needs to be funded with a view to provide pragmatic, evidence-based solutions

Beyond the brain: Developing integrated care models for mental healthcare



Betancourt TS, JAMA Psychiatry ; published online Dec 30, 2015. doi:10.1001/jamapsychiatry.2015.2705

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Interactions between scientists, clinicians and society (1)

Potential areas of fostering interactions

- Participation of lay organizations in scientific congresses
- Presence of brain/mental health research related publications in mass media and social networks
- Joint statements regarding ‚hot' topics (like refugee mental health)
- Joint position against stigmatisation and discrimination of people with brain/mental disorders
- Participation of representatives of lay organizations and policy makers in guideline development committees (e.g., European Guidance project of the EPA)
- Joint development of policy recommendations (e.g., eMEN Interreg project proposal)

Interactions between scientists, clinicians and society (2)

Informing research from multiple views:

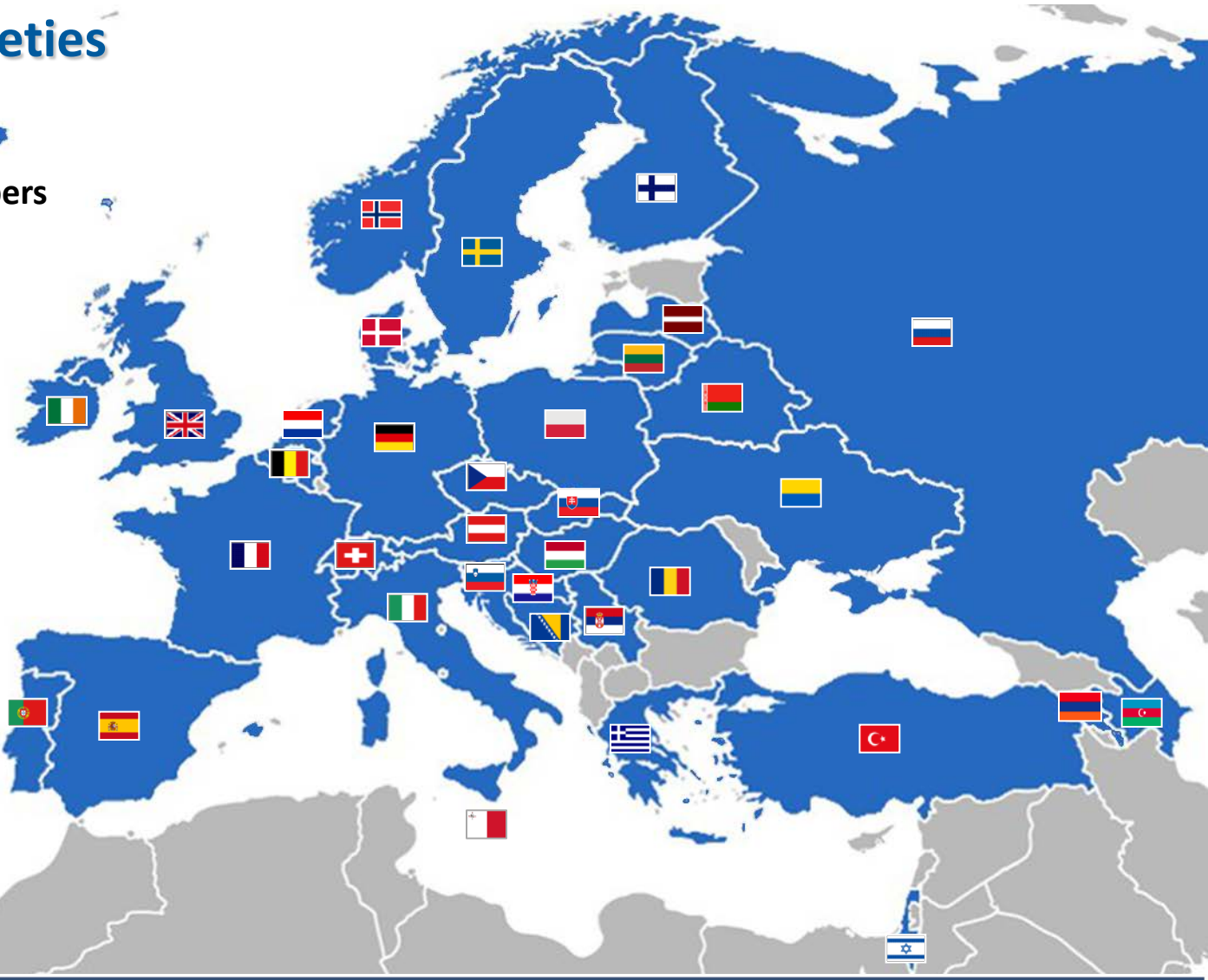
- Use input from lay organizations to inform research directions (‚bottom-up' approach)
- Use clinician input to inform neuroscience research directions
- Strengthen research beyond traditional boundaries: advance research in neuropsychiatry, social cognitive neurosciences, psychotherapy research
- Advance the transfer of neuroscience findings into clinical practice by making the clinical applicability of expected research results a key factor for funding decisions

EPA Member Societies

EPA has

39 National Society Members from 36 (24 EU) countries, representing over 78,650 psychiatrists:

Armenia
Austria
Azerbaijan
Belarus
Belgium
Bosnia-Herz.
Croatia
Czech Rep.
Denmark
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Latvia
Lithuania
Malta
Netherlands
Norway
Poland
Portugal
Romania
Russia
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Turkey
Ukraine
UK



EPA: European Cooperation

- European Brain Council (EBC)
  - Member since 2005
- Alliance for Biomedical Research in Europe
  - Participation in 2011 and 2012
- European Union of Medical Specialists (UEMS)
- Global Alliance of Mental Illness Advocacy Networks-Europe (GAMIAN – Europe)
- European Federation of Associations of Families of People with Mental Illness (EUFAMI)
- European Federation of Psychiatric Trainees (EFPT)
- European Conference on Schizophrenia Research (ECSR)
- European Scientific Association on Schizophrenia and other Psychoses (ESAS)
- A Roadmap for Mental Health Research in Europe (ROAMER)

Interactions with lay organisations: Fostering trialogue

- The involvement of lay organisations and the empowerment of patients has a major priority in the EPA's activities. Compared to older paternalistic care models, users and caregivers have their own voices today. EPA intends to bring together users, caregivers and providers of care to increase the mutual understanding. EPA involves lay organisations in e.g. these activities:

- EPA Forum as discussion platform for scientific, policy and lay organisations

- Involvement of lay organisations in annual European Congress of Psychiatry. Giving a voice to patients, families and carers.

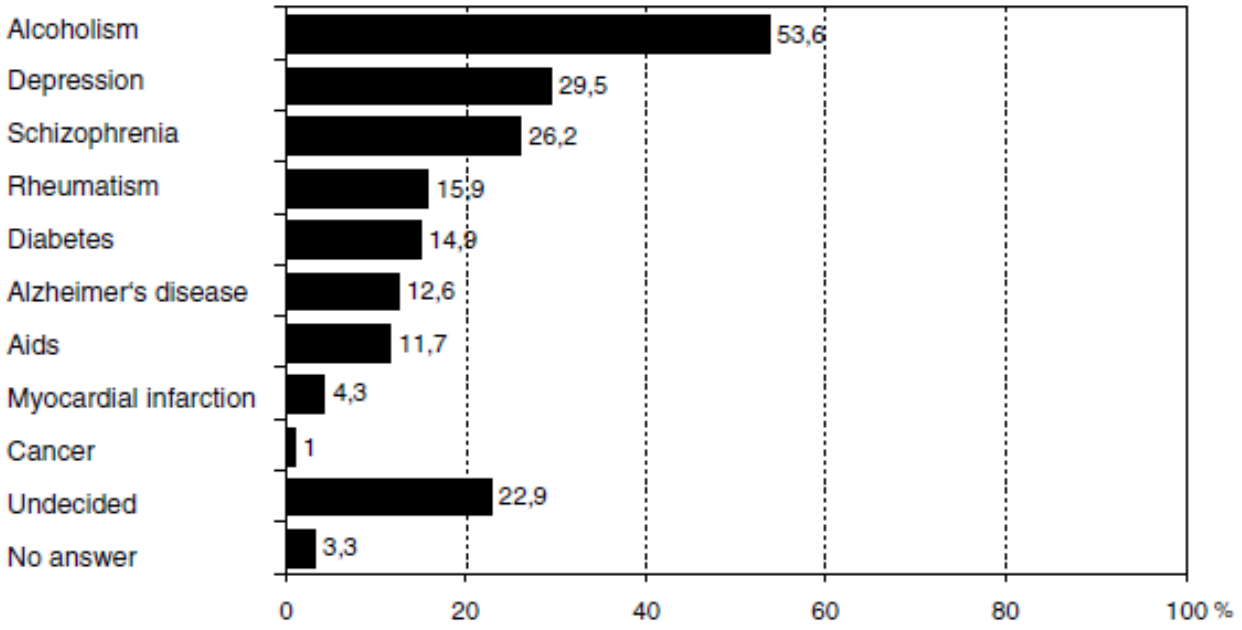
- Including lay organisations in research projects. GAMIAN and EUFAMI are involved in the EBC Value of Treatment Project.

How to inform the public about mental illness

- General increase of biogenetic causal beliefs in the public (Pescosolido et al. 2010, Angermeyer et al., 2015)
- At the same time, no change or an increase of social distance was observed
- A global association between biogenetic causal beliefs and social distance was reported only in some studies
- For alcohol dependence, biogenetic causal beliefs were associated with lower values in social distance (Speerforck et al. 2014)
- Evidence about the association between causal beliefs and social distance varies regarding:
  - the mental health condition (Speerforck et al. 2014)
  - specific causal beliefs (chemical imbalance, brain disease, heredity) (Speerforck et al. 2014)
  - target groups (the public, mental health staff, relatives of patients with mental illness) (Grausgruber et al. 2007)
  - personal contact to persons with mental illness (Cleveland et al. 2013)

Public opinion about cutbacks in expenditures for health care: Discrimination of patients with mental disorders

Fig. 1 Preferences of the German public with regard to saving money for medical care. Question: 'Imagine that expenses for medical care of patients with certain illnesses have to be reduced. Please name those three diseases where, in your opinion, money could best be saved'. Survey in Germany 2004 (n = 1012)

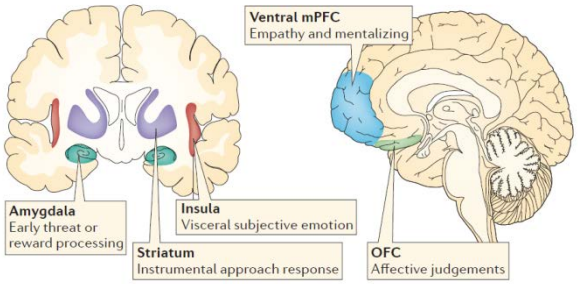


According to resource allocation preferences, psychiatric patients are at risk of being structurally discriminated within the health care system

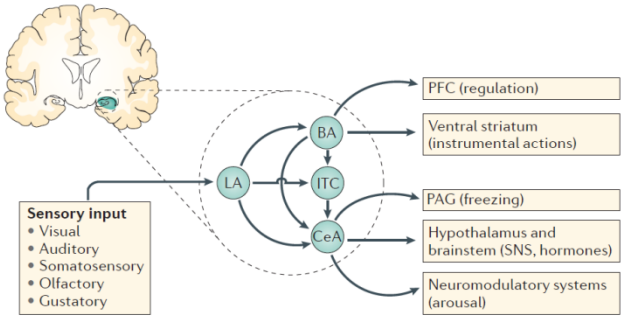
Schomerus G et al., Soc Psychiatry Epidemiol 2006; 41:369-377.

A Neurobiological Basis for Stigma?

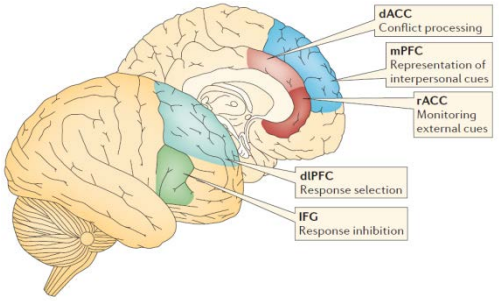
The Prejudice Network



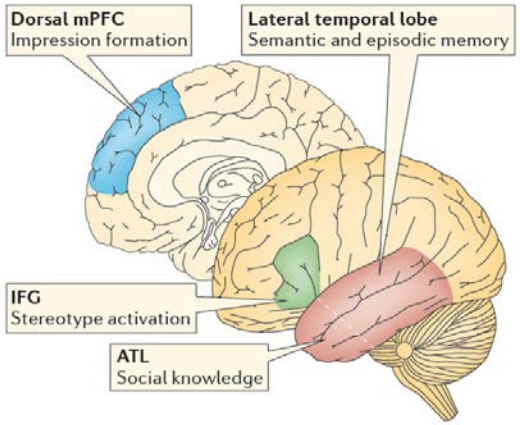
The Role of the Amygdala



The Regulating Network



The Stereotyping Network



Which role do these networks play in stigmatization in individual cases?

May there be multiple combinations of „network alterations“ caused by experiences leading to stigmatization?

Are there temporal dynamics – like learning effects, which may be modulated to reduce stigmatization?

Amodio DM, Nat Rev Neurosci 2014; 15:670-682

Neuroscience, the Public and Stigma

- Neurobiological conceptions alone will not suffice to reduce the stigmatization of mental disorders
- Research programs are necessary to identify the most efficient ways to inform the public about mental disorders and the diagnostic and treatment opportunities provided by psychiatry
- An important field of research will also be to elucidate the neuro-biological basis of stigma
- The neurosciences and lay organizations may support these approaches and need to extend their fields beyond traditional topics of brain research towards mental healthcare research
- Social science studies are necessary to elucidate the interrelations between stigmatizing attitudes, fund allocations and research agendas

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Summary and conclusions

- Psychiatry is a dynamically developing medical and scientific specialty with a biopsychosocial concept of mental disorders
- Mental disorders require a multiperspective approach in clinical practice and research - neurobiology being an essential element of it, but developing and evaluating innovative models of treatment and care being also important
- Recent reviews (ROAMER) provide ample suggestions for research directions
- Beyond brain research, mental healthcare needs further development using evidence-based scientific and technological advances
- A comprehensive and integrated mental health research agenda would be expected to contribute to optimized treatment, care and functional outcome
- An important element of fostering interactions between clinicians, scientists, patients and society at large is the joint development of recommendations for research directions - EPA is providing a forum for it

EUROPEAN PSYCHIATRIC ASSOCIATION

24th EUROPEAN CONGRESS OF PSYCHIATRY

Madrid, Spain 12-15 **March 2016**

www.epa-congress.org

TOWARDS A COMMON LANGUAGE IN EUROPEAN PSYCHIATRY

Thank you for your attention!

What does the psychiatrist expect from basic research in cognitive neuroscience?

- Elucidation of etiopathogenetic mechanisms of mental disorders
- Elucidation of principles of social cognition
- Linking cognitive processes with symptoms of mental disorders
- New cognitive therapeutic approaches for mental disorders

How to take into account psychological and biological aspects in psychiatry?

- Deconstruct mental disorders into its (dys-)functional components
- Identify the psychological mechanisms at work in mental disorders
- Use (neuro-)biological markers to predict disease development and therapeutic responses
- Demonstrate how psychological and biological factors interact
- Provide novel therapeutic approaches using psychological and biological pathomechanisms

What are the emerging new fields in psychiatry?

- Elucidation of the neurobiological underpinnings of mental disorders
- Identify neurobiologic mechanisms of psychosocial factors of mental disorders
- Using GWAS and neuroimaging data for individual prediction of disease development
- Finding new psychopharmacologic agents
- Standardising psychotherapy

What are the new technological advances in psychiatry?

- GWAS
- fMRI
- 3T MRI
- rTMS
- Machine learning
- Connectivity analysis

How does the psychiatrist see psychiatry in 10 years?

- Mental healthcare is provided for all European citizens
- Mental healthcare is more focused on prevention and early detection
- Psychiatry is viewed as a medical discipline providing high-quality mental healthcare and excellent research opportunities
- Psychiatric research questions play an important role in the neurosciences
- Research in psychiatry is equally well funded as research for other highly prevalent and burdensome disorders
- Somatic and mental healthcare are better linked with each other

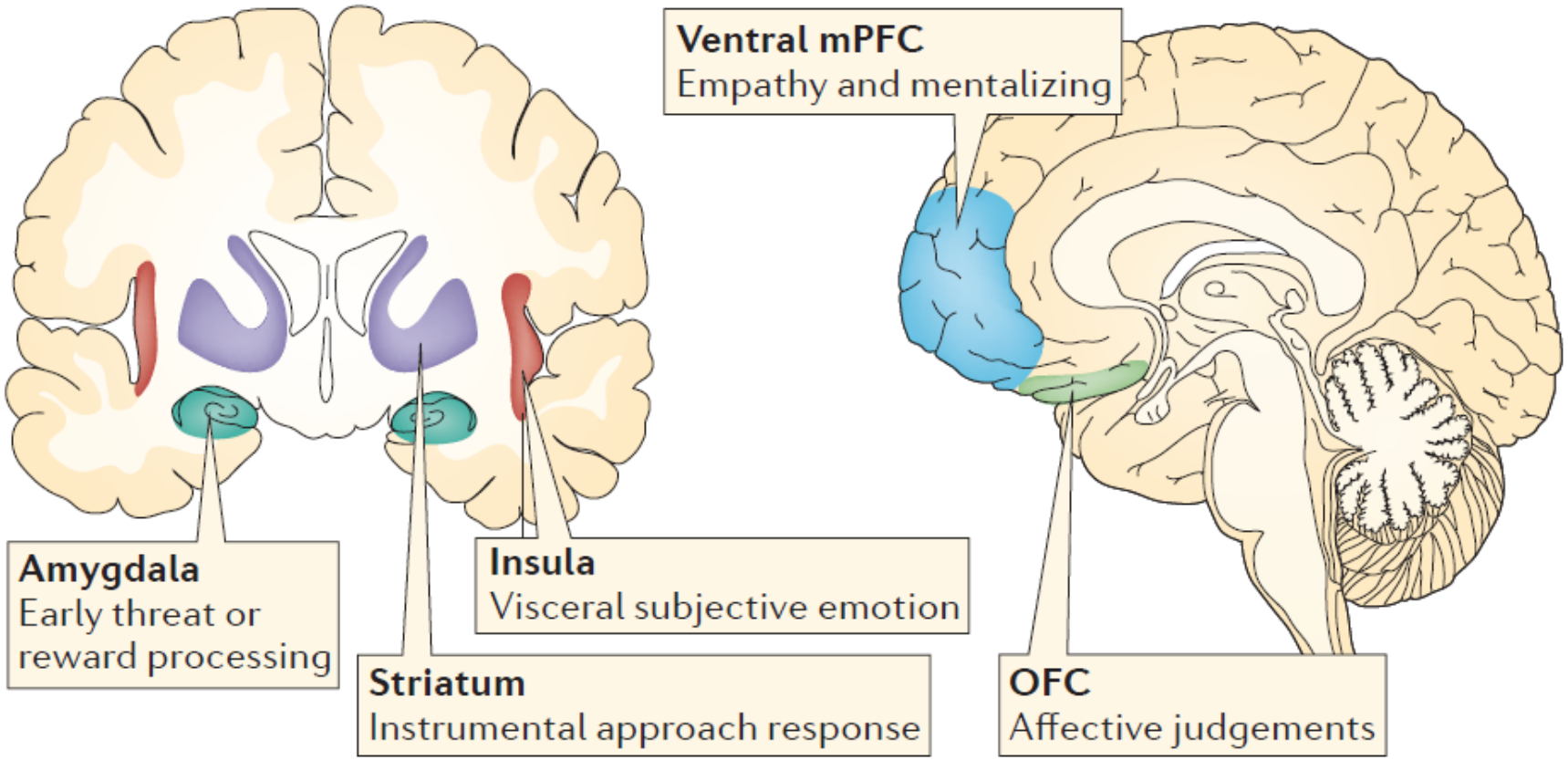
Develop more links between neurology and psychiatry and how?

Yes, because …

- cognitive, psychotic and mood symptoms are phenomenologically similar in mental and neurological disorders,
- there is an increasingly fuzzy and artificial border between both fields (consider Alzheimer´s disease or NMDA-receptor autoantibody-associated psychotic disorders)
- both neurological and mental disorders can be conceptualized as disorders of the brain, and
- psychiatrists and neurologists need comprehensive training and continuing education in the neurosciences and in each other´s clinical field due to the considerable conceptual and clinical overlaps

Excursion: The Prejudice Network

The Prejudice Network



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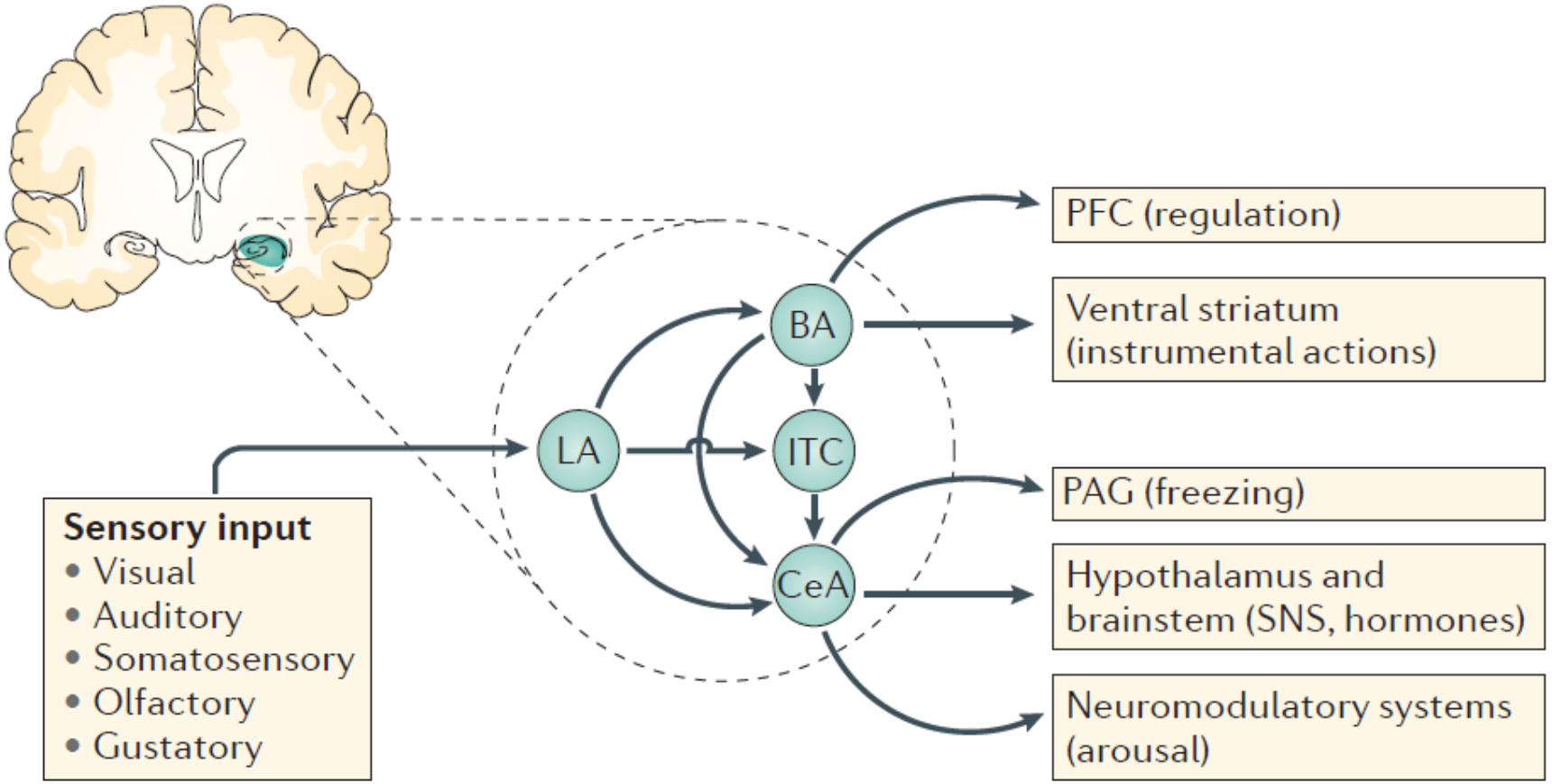

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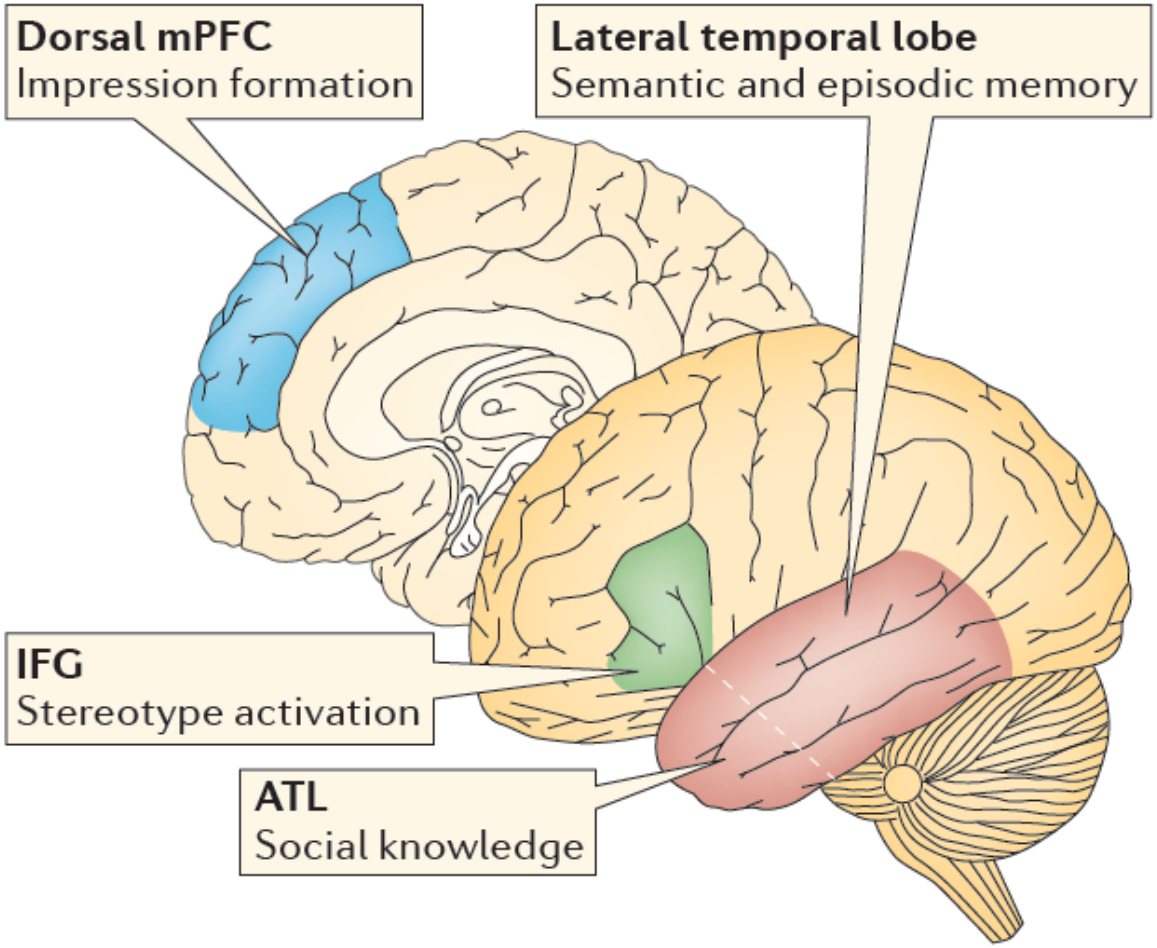

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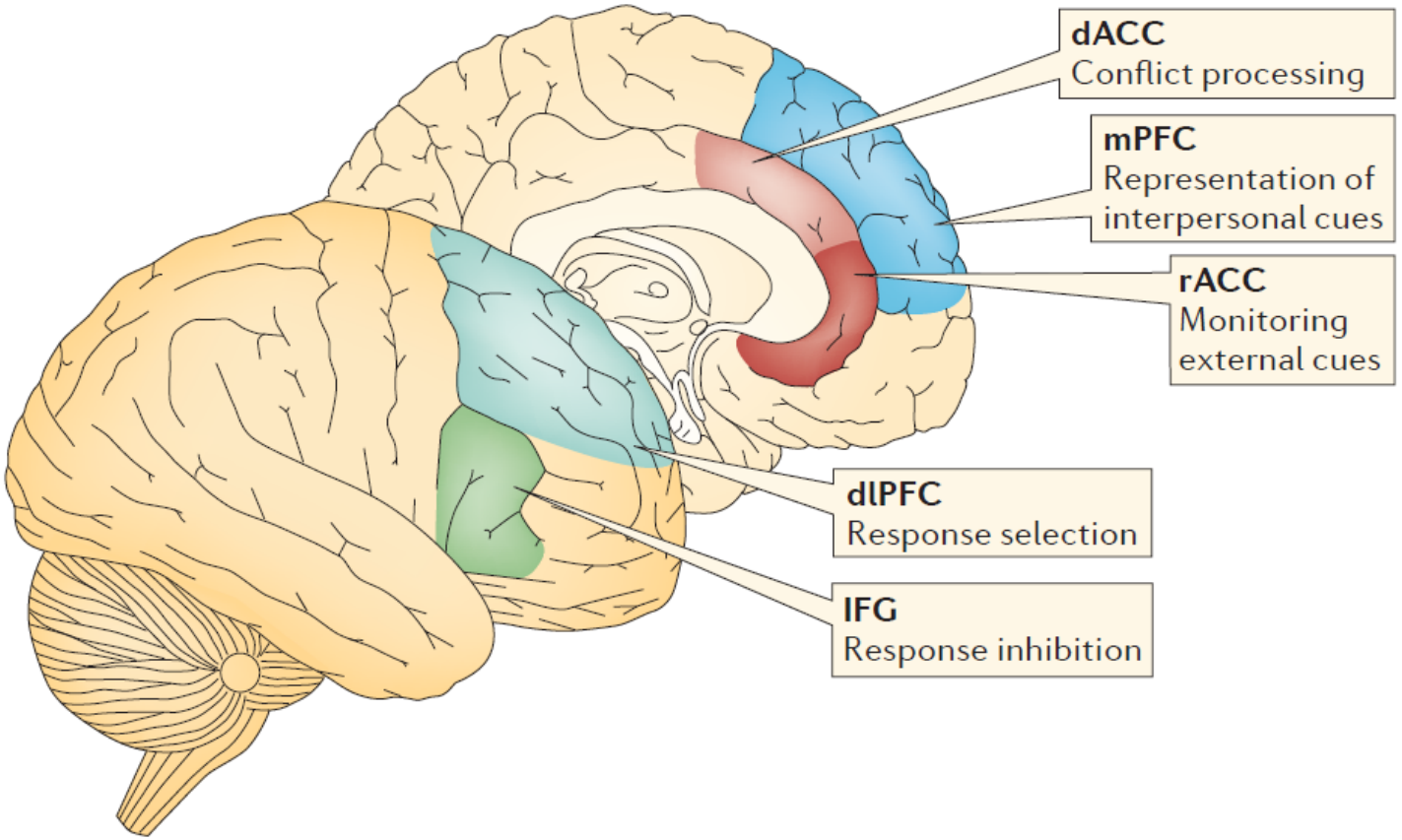

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