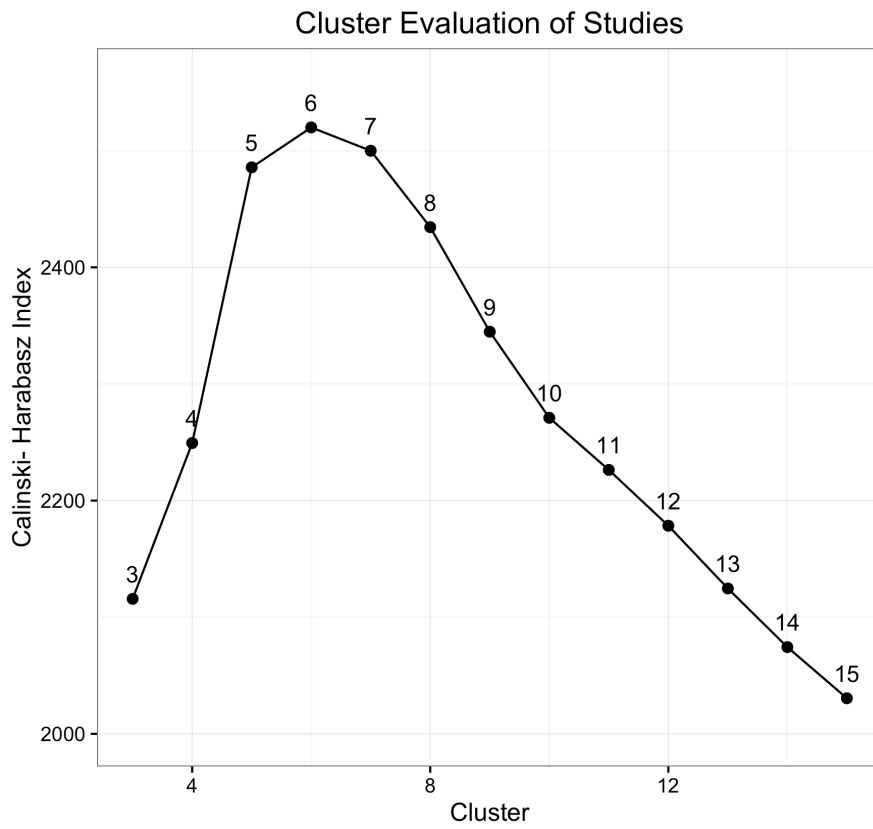


Supplementary Figures



Supplemental figure 1: Results from the cluster stability analyses. Stability analyses suggested six clusters because the peak of cluster stability exists at 6 total clusters.

Supplementary Tables

Supplemental table 1

Component 1 Extreme studies

| PubMed | Title |
|----------|---|
| 11919005 | Processing of changes in visual speech in the human auditory cortex. |
| 20727651 | Neural mechanisms involved in the oral representation of percussion music: an fMRI study. |
| 18702594 | Sentence syntax and content in the human temporal lobe: an fMRI adaptation study in auditory and visual modalities. |
| 19595775 | An fMRI study of syntactic layers: sentential and lexical aspects of embedding. |
| 19458220 | Natural, metaphoric, and linguistic auditory direction signals have distinct influences on visual motion processing. |
| 15219590 | Phonetic perceptual identification by native- and second-language speakers differentially activates brain regions involved with acoustic phonetic processing and those involved with articulatory-audio |
| 16242924 | Action selectivity in parietal and temporal cortex. |
| 24391713 | A word by any other intonation: FMRI evidence for implicit memory traces for pitch contours of spoken words in adult brains. |
| 23376214 | Syntactic priming and the lexical boost effect during sentence production and sentence comprehension: an fMRI study. |
| 19538948 | The effect of lexical priming on sentence comprehension: an fMRI study. |
| 19925195 | Neural dissociations between action verb understanding and motor imagery. |
| 25232302 | Speech motor brain regions are differentially recruited during perception of native and foreign-accented phonemes for first and second language listeners. |
| 24650604 | Are visual texture-selective areas recruited during haptic texture discrimination? |
| 12441063 | The processing of temporal pitch and melody information in auditory cortex. |
| 23049951 | The brain's dorsal route for speech represents word meaning: evidence from gesture. |
| 23238964 | Frontal and temporal contributions to understanding the iconic co-speech gestures that accompany speech. |
| 18381767 | Assimilation and accommodation patterns in ventral occipitotemporal cortex in learning a second writing system. |
| 19350562 | Neural integration of iconic and unrelated coverbal gestures: a functional MRI study. |
| 21097958 | The posterior superior temporal sulcus is sensitive to the outcome of human and non-human goal-directed actions. |
| 25598049 | Long-term experience with Chinese language shapes the fusiform asymmetry of English reading. |

(a) On the positive side of Component 1.

| PubMed | Title |
|---------------|--|
| 15939409 | White matter density in patients with schizophrenia, bipolar disorder and their unaffected relatives. |
| 23141115 | The effects of the catechol-O-methyltransferase val158met polymorphism on white matter connectivity in patients with panic disorder. |
| 19962862 | Cannabis use and callosal white matter structure and integrity in recent-onset schizophrenia. |
| 23178105 | Reduced gray matter volume in psychotic disorder patients with a history of childhood sexual abuse. |
| 10775536 | Clinical and molecular genetic characteristics of patients with cerebrotendinous xanthomatosis. |
| 22721700 | Altered white matter integrity in young adults with first-episode, treatment-naive, and treatment-responsive depression. |
| 23748501 | COMT Val158Met x SLC6A4 5-HTTLPR interaction impacts on gray matter volume of regions supporting emotion processing. |
| 16857316 | The COMT val158met polymorphism and brain morphometry in healthy young adults. |
| 19954931 | White matter connectivity and psychosis in ultra-high-risk subjects: a diffusion tensor fiber tracking study. |
| 19647324 | Genetic variation in apolipoprotein E alters regional gray matter volumes in remitted late-onset depression. |
| 24685285 | A schizophrenia risk gene, ZNF804A, is associated with brain white matter microstructure. |
| 22841128 | Tract-based diffusion tensor imaging in patients with schizophrenia and their non-psychotic siblings. |
| 20837502 | Genetic and environmental influences on focal brain density in bipolar disorder. |
| 19913331 | Diffusion tensor imaging and tract-based spatial statistics in Alzheimer's disease and mild cognitive impairment. |
| 23149033 | White matter integrity in hair-pulling disorder (trichotillomania). |
| 18515047 | White matter abnormalities in subjects at ultra high-risk for schizophrenia and first-episode schizophrenic patients. |
| 21498053 | Decreased gray matter volume in the left hippocampus and bilateral calcarine cortex in coal mine flood disaster survivors with recent onset PTSD. |
| 22079662 | Assessment of white matter abnormalities in paranoid schizophrenia and bipolar mania patients. |
| 18801597 | White matter diffusion alterations in normal women at risk of Alzheimer's disease. |
| 23084185 | Fronto-occipital fasciculus, corpus callosum and superior longitudinal fasciculus tract alterations of first-episode, medication-naive and late-onset panic disorder patients. |

(b) On the negative side of Component 1.

Supplemental table 2

Component 2 Extreme studies

| PubMed | Title |
|---------------|--|
| 19817819 | Group-specific regional white matter abnormality revealed in diffusion tensor imaging of medial temporal lobe epilepsy without hippocampal sclerosis. |
| 20886579 | Gray and white matter asymmetries in healthy individuals aged 21-29 years: a voxel-based morphometry and diffusion tensor imaging study. |
| 16686655 | Voxel-based optimized morphometry (VBM) of gray and white matter in temporal lobe epilepsy (TLE) with and without mesial temporal sclerosis. |
| 16125460 | Diffusion tensor imaging and tractography of distal peripheral nerves at 3 T. |
| 11440343 | Dipole localization for identification of neuronal generators in independent neighboring interictal EEG spike foci. |
| 15325368 | White matter hemisphere asymmetries in healthy subjects and in schizophrenia: a diffusion tensor MRI study. |
| 16762567 | Correlations of interictal FDG-PET metabolism and ictal SPECT perfusion changes in human temporal lobe epilepsy with hippocampal sclerosis. |
| 18410362 | Language lateralization in temporal lobe epilepsy using functional MRI and probabilistic tractography. |
| 10656524 | Systematic approach to dipole localization of interictal EEG spikes in children with extratemporal lobe epilepsies. |
| 18226551 | Brain white matter tracts degeneration in Friedreich ataxia. An in vivo MRI study using tract-based spatial statistics and voxel-based morphometry. |
| 17266101 | Bias between MNI and Talairach coordinates analyzed using the ICBM-152 brain template. |
| 19913331 | Diffusion tensor imaging and tract-based spatial statistics in Alzheimer's disease and mild cognitive impairment. |
| 14607785 | Diffusion tensor MRI of early upper motor neuron involvement in amyotrophic lateral sclerosis. |
| 19620139 | Reading epilepsy from the dominant temporo-occipital region. |
| 18672073 | Brain white matter damage in SCA1 and SCA2. An in vivo study using voxel-based morphometry, histogram analysis of mean diffusivity and tract-based spatial statistics. |
| 18261930 | Voxel-based diffusion tensor imaging in patients with mesial temporal lobe epilepsy and hippocampal sclerosis. |
| 12595188 | From diffusion tractography to quantitative white matter tract measures: a reproducibility study. |
| 15219602 | Diffusion tensor imaging: serial quantitation of white matter tract maturity in premature newborns. |
| 20932911 | Age- and gender-related changes in the normal human brain using hybrid diffusion imaging (HYDI). |
| 23921095 | Structural white matter asymmetries in relation to functional asymmetries during speech perception and production. |

(a) On the positive side of Component 2.

| PubMed | Title |
|----------|---|
| 19925198 | Neural mechanisms of the testosterone-aggression relation: the role of orbitofrontal cortex. |
| 17137563 | Understanding genetic risk for aggression: clues from the brain's response to social exclusion. |
| 18498743 | Oxytocin shapes the neural circuitry of trust and trust adaptation in humans. |
| 20736070 | Emotional conflict in interpersonal interactions. |
| 21490964 | Relief as a reward: hedonic and neural responses to safety from pain. |
| 23223206 | Common and distinct neural features of social and non-social reward processing in autism and social anxiety disorder. |
| 25243988 | The medial orbitofrontal cortex encodes a general unsigned value signal during anticipation of both appetitive and aversive events. |
| 25552568 | Anticipation of peer evaluation in anxious adolescents: divergence in neural activation and maturation. |
| 17483451 | Gene-gene interaction associated with neural reward sensitivity. |
| 22079658 | Major depressive disorder is characterized by greater reward network activation to monetary than pleasant image rewards. |
| 24760847 | Valence-Specific Effects of BDNF Val66Met Polymorphism on Dopaminergic Stress and Reward Processing in Humans. |
| 25193949 | Adaptive neural reward processing during anticipation and receipt of monetary rewards in mindfulness meditators. |
| 16339042 | Oxytocin modulates neural circuitry for social cognition and fear in humans. |
| 22015853 | Don't look back in anger: neural correlates of reappraisal, analytical rumination, and angry rumination during recall of an anger-inducing autobiographical memory. |
| 23562770 | Increased neural responses to unfairness in a loss context. |
| 21356267 | 5-HTTLPR and COMTval158met genotype gate amygdala reactivity and habituation. |
| 21510979 | DRD2/ANKK1 TaqI A polymorphism affects corticostriatal activity in response to negative affective facial stimuli. |
| 20493234 | Neural and behavioral responses to threatening emotion faces in children as a function of the short allele of the serotonin transporter gene. |
| 18634888 | Catechol-O-methyltransferase val158met genotype influences neural processing of reward anticipation. |
| 21254801 | The influence of emotion regulation on decision-making under risk. |

(b) On the negative side of Component 2.

Supplemental table 3

Component 3 Extreme studies

| PubMed | Title |
|---------------|--|
| 19478033 | The impact of second language learning on semantic and nonsemantic first language reading. |
| 23938321 | Cerebral mechanisms for different second language writing systems. |
| 25598049 | Long-term experience with Chinese language shapes the fusiform asymmetry of English reading. |
| 18381767 | Assimilation and accommodation patterns in ventral occipitotemporal cortex in learning a second writing system. |
| 17133384 | The interaction between orthographic and phonological information in children: an fMRI study. |
| 16716387 | Neuroanatomically separable effects of imageability and grammatical class during single-word comprehension. |
| 20854914 | Neuroimaging reveals dual routes to reading in simultaneous proficient readers of two orthographies. |
| 15849713 | Processing lexical semantic and syntactic information in first and second language: fMRI evidence from German and Russian. |
| 23747332 | Mapping the reading circuitry for skilled deaf readers: an fMRI study of semantic and phonological processing. |
| 18282770 | Phonological processing in deaf signers and the impact of age of first language acquisition. |
| 22245646 | Neural basis of phonological processing in second language reading: an fMRI study of Chinese regularity effect. |
| 21146615 | Neural deficits in second language reading: fMRI evidence from Chinese children with English reading impairment. |
| 22815229 | Reading acquisition reorganizes the phonological awareness network only in alphabetic writing systems. |
| 16126414 | Phonological processing in Chinese-English bilingual biscriptals: an fMRI study. |
| 14728923 | Neural processing of nouns and verbs: the role of inflectional morphology. |
| 19538948 | The effect of lexical priming on sentence comprehension: an fMRI study. |
| 19595775 | An fMRI study of syntactic layers: sentential and lexical aspects of embedding. |
| 21693783 | Brain basis of phonological awareness for spoken language in children and its disruption in dyslexia. |
| 21391265 | Neural basis of single-word reading in Spanish-English bilinguals. |
| 19328233 | Syntactic priming in German-English bilinguals during sentence comprehension. |

(a) On the positive side of Component 3.

| PubMed | Title |
|----------|--|
| 17360197 | Representation of cold allodynia in the human brain--a functional MRI study. |
| 19492300 | Differential activation of the human trigeminal nuclear complex by noxious and non-noxious orofacial stimulation. |
| 18258366 | Functional MRI of the brain detects neuropathic pain in experimental spinal cord injury. |
| 16368192 | A PET activation study of brush-evoked allodynia in patients with nerve injury pain. |
| 21291923 | Brain imaging of mechanically induced muscle versus cutaneous pain. |
| 15217377 | Neural activation during experimental allodynia: a functional magnetic resonance imaging study. |
| 17336547 | Mapping the spinal and supraspinal pathways of dynamic mechanical allodynia in the human trigeminal system using cardiac-gated fMRI. |
| 17050704 | Trigeminal neuropathic pain alters responses in CNS circuits to mechanical (brush) and thermal (cold and heat) stimuli. |
| 20732744 | Bilateral activation of the trigeminothalamic tract by acute orofacial cutaneous and muscle pain in humans. |
| 15601733 | Regional intensive and temporal patterns of functional MRI activation distinguishing noxious and innocuous contact heat. |
| 21677181 | Parallel processing of nociceptive and non-nociceptive somatosensory information in the human primary and secondary somatosensory cortices: evidence from dynamic causal modeling of functional magnet |
| 25461267 | Cerebral responses and role of the prefrontal cortex in conditioned pain modulation: an fMRI study in healthy subjects. |
| 22537316 | Phantom digit somatotopy: a functional magnetic resonance imaging study in forearm amputees. |
| 11673327 | Phantom movements and pain. An fMRI study in upper limb amputees. |
| 16112876 | Differential coding of hyperalgesia in the human brain: a functional MRI study. |
| 22096519 | Evidence for thalamic involvement in the thermal grill illusion: an FMRI study. |
| 19375510 | Offset analgesia is mediated by activation in the region of the periaqueductal grey and rostral ventromedial medulla. |
| 22539862 | BOLD responses in somatosensory cortices better reflect heat sensation than pain. |
| 19027233 | Neuropathic pain and primary somatosensory cortex reorganization following spinal cord injury. |
| 18329293 | Human secondary somatosensory cortex is involved in the processing of somatosensory rare stimuli: an fMRI study. |

(b) On the negative side of Component 3.

Supplemental table 4

Component 4 Extreme studies

| PubMed | Title |
|---------------|---|
| 17689985 | Impact of the COMT Val108/158 Met and DAT genotypes on prefrontal function in healthy subjects. |
| 18252743 | COMT val158met genotype affects recruitment of neural mechanisms supporting fluid intelligence. |
| 23748501 | COMT Val158Met x SLC6A4 5-HTTLPR interaction impacts on gray matter volume of regions supporting emotion processing. |
| 23859480 | Modulating effect of COMT genotype on the brain regions underlying proactive control process during inhibition. |
| 19054502 | Opposite effects of catechol-O-methyltransferase Val158Met on cortical function in healthy subjects and patients with schizophrenia. |
| 18988738 | MTHFR 677C --> T genotype disrupts prefrontal function in schizophrenia through an interaction with COMT 158Val --> Met. |
| 19641018 | COMT val108/158 met genotype affects neural but not cognitive processing in healthy individuals. |
| 17483451 | Gene-gene interaction associated with neural reward sensitivity. |
| 24384148 | Structural neuroimaging correlates of allelic variation of the BDNF val66met polymorphism. |
| 18423780 | Prion protein M129V polymorphism affects retrieval-related brain activity. |
| 19666577 | Epistasis between the DAT 3' UTR VNTR and the COMT Val158Met SNP on cortical function in healthy subjects and patients with schizophrenia. |
| 18374902 | Epistasis between dopamine regulating genes identifies a nonlinear response of the human hippocampus during memory tasks. |
| 18634888 | Catechol-O-methyltransferase val158met genotype influences neural processing of reward anticipation. |
| 19482231 | Influence of SLC6A3 and COMT variation on neural activation during response inhibition. |
| 16452664 | The dopaminergic midbrain participates in human episodic memory formation: evidence from genetic imaging. |
| 17427209 | Abnormal cortical activation during response inhibition in 22q11.2 deletion syndrome. |
| 21514925 | Influence of the COMT genotype on working memory and brain activity changes during development. |
| 22306803 | Interaction of COMT val158met and externalizing behavior: relation to prefrontal brain activity and behavioral performance. |
| 16330500 | The association between the Val158Met polymorphism of the catechol-O-methyl transferase gene and morphological abnormalities of the brain in chronic schizophrenia. |
| 22387174 | Catechol-O-methyltransferase gene variation: impact on amygdala response to aversive stimuli. |

(a) On the positive side of Component 4.

| PubMed | Title |
|----------|--|
| 17360197 | Representation of cold allodynia in the human brain--a functional MRI study. |
| 16368192 | A PET activation study of brush-evoked allodynia in patients with nerve injury pain. |
| 17050704 | Trigeminal neuropathic pain alters responses in CNS circuits to mechanical (brush) and thermal (cold and heat) stimuli. |
| 22096519 | Evidence for thalamic involvement in the thermal grill illusion: an fMRI study. |
| 15217377 | Neural activation during experimental allodynia: a functional magnetic resonance imaging study. |
| 25461267 | Cerebral responses and role of the prefrontal cortex in conditioned pain modulation: an fMRI study in healthy subjects. |
| 17336547 | Mapping the spinal and supraspinal pathways of dynamic mechanical allodynia in the human trigeminal system using cardiac-gated fMRI. |
| 19492300 | Differential activation of the human trigeminal nuclear complex by noxious and non-noxious orofacial stimulation. |
| 24741051 | Neuroanatomical profiles of deafness in the context of native language experience. |
| 18258366 | Functional MRI of the brain detects neuropathic pain in experimental spinal cord injury. |
| 20802090 | Physical temperature effects on trust behavior: the role of insula. |
| 15601733 | Regional intensive and temporal patterns of functional MRI activation distinguishing noxious and innocuous contact heat. |
| 22539862 | BOLD responses in somatosensory cortices better reflect heat sensation than pain. |
| 16112876 | Differential coding of hyperalgesia in the human brain: a functional MRI study. |
| 18614290 | Central representation of cold-evoked pain relief in capsaicin induced pain: an event-related fMRI study. |
| 18471869 | The bimodal bilingual brain: effects of sign language experience. |
| 16434417 | Mechanisms of central neuropathic pain: a combined psychophysical and fMRI study in syringomyelia. |
| 25598049 | Long-term experience with Chinese language shapes the fusiform asymmetry of English reading. |
| 17407825 | Capsaicin-induced thermal hyperalgesia and sensitization in the human trigeminal nociceptive pathway: an fMRI study. |
| 18384958 | Brain dynamics for perception of tactile allodynia (touch-induced pain) in postherpetic neuralgia. |

(b) On the negative side of Component 4.

Supplemental table 5

Component 5 Extreme studies

| PubMed | Title |
|---------------|---|
| 19467357 | Innocent intentions: a correlation between forgiveness for accidental harm and neural activity. |
| 18342544 | The neural basis of belief encoding and integration in moral judgment. |
| 17376703 | Neural correlates of true and false belief reasoning. |
| 22300812 | Functional activity of the right temporo-parietal junction and of the medial prefrontal cortex associated with true and false belief reasoning. |
| 22406016 | The neural dissociation of subjective valuation from choice processes in intertemporal choice. |
| 22221735 | The neural predictors of choice preference in intertemporal choice. |
| 23160812 | Roman Catholic beliefs produce characteristic neural responses to moral dilemmas. |
| 25298010 | Is moral beauty different from facial beauty? Evidence from an fMRI study. |
| 20678489 | Modulation of the cortical false belief network during development. |
| 19878727 | A functional imaging investigation of moral deliberation and moral intuition. |
| 22711879 | Differential neural circuitry and self-interest in real vs hypothetical moral decisions. |
| 20350933 | Unfair? It depends: neural correlates of fairness in social context. |
| 24662580 | Prefrontal mechanisms in preference and non-preference-based judgments. |
| 23562770 | Increased neural responses to unfairness in a loss context. |
| 18203696 | Neural correlates of human virtue judgment. |
| 21452951 | Is morality unified? Evidence that distinct neural systems underlie moral judgments of harm, dishonesty, and disgust. |
| 22459338 | Moral decision-making, ToM, empathy and the default mode network. |
| 20150342 | On the wrong side of the trolley track: neural correlates of relative social valuation. |
| 18606175 | The influence of prior record on moral judgment. |
| 24790211 | Social equality in the number of choice options is represented in the ventromedial prefrontal cortex. |

(a) On the positive side of Component 5.

| PubMed | Title |
|----------|---|
| 23748501 | COMT Val158Met x SLC6A4 5-HTTLPR interaction impacts on gray matter volume of regions supporting emotion processing. |
| 17689985 | Impact of the COMT Val108/158 Met and DAT genotypes on prefrontal function in healthy subjects. |
| 18252743 | COMT val158met genotype affects recruitment of neural mechanisms supporting fluid intelligence. |
| 19054502 | Opposite effects of catechol-O-methyltransferase Val158Met on cortical function in healthy subjects and patients with schizophrenia. |
| 23859480 | Modulating effect of COMT genotype on the brain regions underlying proactive control process during inhibition. |
| 24384148 | Structural neuroimaging correlates of allelic variation of the BDNF val66met polymorphism. |
| 22387174 | Catechol-O-methyltransferase gene variation: impact on amygdala response to aversive stimuli. |
| 18988738 | MTHFR 677C --> T genotype disrupts prefrontal function in schizophrenia through an interaction with COMT 158Val --> Met. |
| 21156209 | COMT Val158Met polymorphism, verbalizing of emotion and activation of affective brain systems. |
| 17483451 | Gene-gene interaction associated with neural reward sensitivity. |
| 19641018 | COMT val108/158 met genotype affects neural but not cognitive processing in healthy individuals. |
| 16330500 | The association between the Val158Met polymorphism of the catechol-O-methyl transferase gene and morphological abnormalities of the brain in chronic schizophrenia. |
| 19666577 | Epistasis between the DAT 3' UTR VNTR and the COMT Val158Met SNP on cortical function in healthy subjects and patients with schizophrenia. |
| 21356267 | 5-HTTLPR and COMTval158met genotype gate amygdala reactivity and habituation. |
| 18634888 | Catechol-O-methyltransferase val158met genotype influences neural processing of reward anticipation. |
| 19482231 | Influence of SLC6A3 and COMT variation on neural activation during response inhibition. |
| 21514925 | Influence of the COMT genotype on working memory and brain activity changes during development. |
| 22306803 | Interaction of COMT val158met and externalizing behavior: relation to prefrontal brain activity and behavioral performance. |
| 18423780 | Prion protein M129V polymorphism affects retrieval-related brain activity. |
| 16857316 | The COMT val158met polymorphism and brain morphometry in healthy young adults. |

(a) On the positive side of Component 5.

Supplemental table 6

Extreme words per cluster

| Cluster | Most 20 frequent words | Least 20 frequent words |
|---------|---|--|
| 1 | process, left, tempor, frontal, gyrus, inferior, word, superior, auditori, languag, semant, hemispher, middl, percept, speech, recognit, complex, read, mean, sulcus | master, focuss, fruit, innat, singular, strip, anteced, kept, learnt, mapp, posterolater, quiet, anterolater, nonmusician, orbitali, cogn, colleg, holist, inferotempor, nonlinguist |
| 2 | brain, control, imag, patient, subject, correl, use, group, compar, connect, signific, cognit, differ, chang, healthi, analysi, bilater, age, base, structur | breakdown, checklist, degen, ecnp, inadequ, custom, cut, epidemiolog, eventu, inpati, plateau, subsampl, coexist, indistinguish, mortem, nation, proof, suppli, algebra, clinician |
| 3 | cortic, motor, pain, movement, bold, hand, stimul, sensori, primari, induc, thalamus, bodi, blood, somatosensori, central, appli, evok, intens, sensorimotor, record | electromyograph, exacerb, neglig, collater, transmit, innerv, allevi, amplif, bowel, cerebrum, debilit, genicul, fingertip, first, peripheri, cyclic, subthreshold, territori, width, desynchron |
| 4 | activ, function, region, cortex, task, studi, relat, area, fmri, result, network, suggest, perform, memori, effect, visual, magnet, involv, pariet, investig | favour, host, vast, disput, expens, obscur, truli, wealth, abolish, accentu, instantan, necessit, perfect, prescrib, succeed, sudden, convolv, decay, necess, paid |
| 5 | respons, associ, neural, increas, emot, prefront, reson, particip, anterior, find, behavior, stimuli, face, individu, cingul, examin, medial, amygdala, negat, social | foster, operation, philosoph, schedul, suboptim, pituitari, problemat, assay, evoc, height, idiosyncrat, avenu, cautious, endocrin, give, salivari, deeper, laden, told, tryptophan |
| 6 | variat, genet, dopamin, gene, carrier, allel, genotyp, receptor, polymorph, dopaminerg, variant, met, dose, comt, serotonin, suscept, val, mutat, phenotyp, apo | norepinephrin, enzym, ethnic, neuromodul, tandem, composit, methyltransferas, neurotroph, methyl, uptak, catechol, glutam, monozygot, molecular, serum, commiss, apolipoprotein, neurotransmitt, asymptomat, delet |

Note. The 20 most and least frequent words per cluster. The most frequent words help characterize the subdomain within functional neuroimaging. The least frequent words also help us interpret which words are rarely used in that cluster, which helps characterize the types of studies not within the subdomains of functional neuroimaging.

Supplemental table 7

Terms close to the cluster barycenters.

| Cluster | Top 20 Words Closest to the Center of words clusters |
|----------------|---|
| 1 | decod, nonsens, class, occipitotempor, regular, ifg, heteromod, anterolater, inner, pseudo, specialis, passag, figur, embed, smg, meaningless, letter, broca, artificii, learner |
| 2 | homogen, regress, heterogen, widespread, mri, predictor, disrupt, entorhin, patient, covari, ancova, incid, statist, onset, lower, reduct, clinic, subtl, enlarg, priori |
| 3 | peripher, transmit, primari, subthreshold, secundari, contact, sharp, cyclic, tip, flow, effer, analogu, rtms, threshold, territori, reflex, genicul, anesthet, calibr, burst |
| 4 | necessari, variet, seri, propos, step, separ, causal, allow, permit, accord, exact, driven, temporari, manner, equival, path, necessarili, assumpt, hybrid, model |
| 5 | foster, experienc, laborator, dorsomedi, negat, tendenc, subjected, psycholog, acc, positiv, pleas, detriment, prone, diminish, take, ventromedi, introspect, style, remind, paracingul |
| 6 | gene, methyl, nucleotid, snp, transport, protein, delet, carrier, variat, genet, dopamin, glutam, uptak, composit, suscept, mutat, ethnic, variant, fmr, genom |

Note. The 20 terms closest to the center of each cluster. These terms help characterize the expected “average” or typical study within each cluster.

Supplemental table 8

Studies closest to the “barycenter” of cluster 1

| PubMed | Title |
|---------------|---|
| 19715732 | Neural activations correlated with reading speed during reading novels. |
| 19812331 | Temporal order processing of syllables in the left parietal lobe. |
| 19580874 | Time course and functional neuroanatomy of speech segmentation in adults. |
| 21600637 | Brain networks associated with sublexical properties of Chinese characters. |
| 16855090 | Cracking the language code: neural mechanisms underlying speech parsing. |
| 20143384 | Left cytoarchitectonic BA 44 processes syntactic gender violations in determiner phrases. |
| 24845161 | Neural correlates and network connectivity underlying narrative production and comprehension: A combined fMRI and PET study. |
| 15850725 | Adults and children processing music: an fMRI study. |
| 17133399 | Neural characteristics of successful and less successful speech and word learning in adults. |
| 18639536 | fMRI characterization of the language formulation area. |
| 24135134 | Cross-linguistic parallels in processing derivational morphology: evidence from Polish. |
| 22691614 | Neural correlates of continuous causal word generation. |
| 20627366 | An fMRI study of sentence-embedded lexical-semantic decision in children and adults. |
| 21994390 | Explaining left lateralization for words in the ventral occipitotemporal cortex. |
| 22504766 | From a concept to a word in a syntactically complete sentence: an fMRI study on spontaneous language production in an overt picture description task. |
| 25463812 | Early MEG markers for reading Chinese phonograms: Evidence from radical combinability and consistency effects. |
| 19931402 | Phonological processing in post-lingual deafness and cochlear implant outcome. |
| 16842827 | An event-related fMRI investigation of phonological-lexical competition. |
| 18778780 | Piecemeal recruitment of left-lateralized brain areas during reading: a spatio-functional account. |
| 25528288 | Visuospatial complexity modulates reading in the brain. |

Supplemental table 9

Studies closest to the “barycenter” of cluster 2

| PubMed | Title |
|---------------|--|
| 18172852 | Cortical dysfunction in patients with Huntington's disease during working memory performance. |
| 23993992 | Inferior frontal and insular cortical thinning is related to dysfunctional brain activation/deactivation during working memory task in schizophrenic patients. |
| 17627848 | Distinct mechanisms of altered brain activation in patients with multiple sclerosis. |
| 22984460 | Intrinsic brain connectivity related to age in young and middle aged adults. |
| 16054343 | Functional imaging evidence of the relationship between recurrent psychotic episodes and neurodegenerative course in schizophrenia. |
| 21095105 | Correlated structural and functional brain abnormalities in the default mode network in schizophrenia patients. |
| 20053346 | Alterations in regional homogeneity of resting-state brain activity in autism spectrum disorders. |
| 19699190 | Abnormal resting-state functional connectivity patterns of the putamen in medication-naïve children with attention deficit hyperactivity disorder. |
| 23426796 | Network analysis of auditory hallucinations in nonpsychotic individuals. |
| 22578721 | Default mode network activity in schizophrenia studied at resting state using probabilistic ICA. |
| 25226035 | Disrupted brain functional network in internet addiction disorder: a resting-state functional magnetic resonance imaging study. |
| 18653667 | Development of anterior cingulate functional connectivity from late childhood to early adulthood. |
| 24824731 | Nonlinear complexity analysis of brain fMRI signals in schizophrenia. |
| 18952678 | Control networks in paediatric Tourette syndrome show immature and anomalous patterns of functional connectivity. |
| 22815223 | Executive performance is related to regional gray matter volume in healthy older individuals. |
| 24380677 | Spontaneous brain activity in adult patients with moyamoya disease: a resting-state fMRI study. |
| 15325350 | Covariance PET patterns in early Alzheimer's disease and subjects with cognitive impairment but no dementia: utility in group discrimination and correlations with functional performance. |
| 18053618 | Brain structure and function related to cognitive reserve variables in normal aging, mild cognitive impairment and Alzheimer's disease. |
| 25445623 | Disruptive changes of cerebellar functional connectivity with the default mode network in schizophrenia. |
| 25505309 | Modality-spanning deficits in attention-deficit/hyperactivity disorder in functional networks, gray matter, and white matter. |

Supplemental table 10

Studies closest to the “barycenter” of cluster 3

| PubMed | Title |
|---------------|---|
| 15499576 | Effects of electroacupuncture versus manual acupuncture on the human brain as measured by fMRI. |
| 23451129 | Different brain activation under left and right ventricular stimulation: an fMRI study in anesthetized rats. |
| 19666085 | An fMRI study of neuronal specificity of an acupoint: electroacupuncture stimulation of Yanglingquan (GB34) and its sham point. |
| 15036060 | Effects of distraction on magnetoencephalographic responses ascending through C-fibers in humans. |
| 21741443 | Cortical processing of tactile direction discrimination based on spatiotemporal cues in man. |
| 22451353 | Perceptual plasticity is mediated by connectivity changes of the medial thalamic nucleus. |
| 23523804 | Neuroimaging to detect cortical projection of vestibular response to caloric stimulation in young and older adults using functional near-infrared spectroscopy (fNIRS). |
| 20708069 | Processing in prefrontal cortex underlies tactile direction discrimination: An fMRI study of a patient with a traumatic spinal cord lesion. |
| 17990299 | Functional neuroanatomical investigation of vision-related acupuncture point specificity--a multisession fMRI study. |
| 19061937 | The neural substrates of verum acupuncture compared to non-penetrating placebo needle: an fMRI study. |
| 23769917 | Comparing neural response to painful electrical stimulation with functional MRI at 3 and 7 T. |
| 17157035 | Test-retest study of fMRI signal change evoked by electroacupuncture stimulation. |
| 12062028 | Driving plasticity in human adult motor cortex is associated with improved motor function after brain injury. |
| 18495495 | Behavioral correlates of negative BOLD signal changes in the primary somatosensory cortex. |
| 17293127 | Activation of the supplementary motor area (SMA) during voluntary pelvic floor muscle contractions--an fMRI study. |
| 14642286 | Functional imaging of perceptual learning in human primary and secondary somatosensory cortex. |
| 12809978 | Cortical motor areas in plantar response: an event-related functional magnetic resonance imaging study in normal subjects. |
| 20884359 | Representation of somatosensory inputs within the cortical autonomic network. |
| 19559684 | Acupuncture mobilizes the brain's default mode and its anti-correlated network in healthy subjects. |
| 22245354 | Taste laterality studied by means of umami and salt stimuli: an fMRI study. |

Supplemental table 11

Studies closest to the “barycenter” of cluster 4

| PubMed | Title |
|---------------|---|
| 21316475 | Cortical and striatal contributions to automaticity in information-integration categorization. |
| 15907304 | The activation of attentional networks. |
| 11880658 | Neural mechanisms of planning: a computational analysis using event-related fMRI. |
| 14627638 | Experience-dependent activation patterns in human brain during visual-motor associative learning. |
| 24564464 | The role of right prefrontal and medial cortex in response inhibition: interfering with action restraint and action cancellation using transcranial magnetic brain stimulation. |
| 22759716 | Building virtual reality fMRI paradigms: a framework for presenting immersive virtual environments. |
| 23516304 | Neural changes with tactile learning reflect decision-level reweighting of perceptual readout. |
| 21976418 | Optimized neural coding? Control mechanisms in large cortical networks implemented by connectivity changes. |
| 22262876 | Learning acts on distinct processes for visual form perception in the human brain. |
| 20100583 | Saliency maps in parietal cortex: imaging and computational modeling. |
| 19945445 | The impact of left hemisphere stroke on force control with familiar and novel objects: neuroanatomic substrates and relationship to apraxia. |
| 22285219 | Multiple sensitivity profiles to diversity and transition structure in non-stationary input. |
| 20089812 | The time course of ventrolateral prefrontal cortex involvement in memory formation. |
| 15924867 | Top-down reorganization of activity in the visual pathway after learning a shape identification task. |
| 12672965 | Predicting the practice effects on the blood oxygenation level-dependent (BOLD) function of fMRI in a symbolic manipulation task. |
| 18951984 | Cerebral representations of space and time. |
| 11839605 | Top-down controlled visual dimension weighting: an event-related fMRI study. |
| 20362682 | Continuous motor sequence learning: cortical efficiency gains accompanied by striatal functional reorganization. |
| 20617884 | Assessing the neural basis of uncertainty in perceptual category learning through varying levels of distortion. |
| 18375149 | Transient and linearly graded deactivation of the human default-mode network by a visual detection task. |

Supplemental table 12

Studies closest to the “barycenter” of cluster 5

| PubMed | Title |
|---------------|--|
| 18344175 | The neurophysiological bases of emotion: An fMRI study of the affective circumplex using emotion-denoting words. |
| 25631056 | The Brain Basis of Positive and Negative Affect: Evidence from a Meta-Analysis of the Human Neuroimaging Literature. |
| 19555674 | Neural correlates of processing stressful information: an event-related fMRI study. |
| 16973382 | A neural network reflecting individual differences in cognitive processing of emotions during perceptual decision making. |
| 25249408 | Brain Mechanisms of Social Threat Effects on Working Memory. |
| 20418072 | Escitalopram attenuates posterior cingulate activity during self-evaluation in healthy volunteers. |
| 14659102 | Humor modulates the mesolimbic reward centers. |
| 25453167 | Executive-affective connectivity in smokers viewing anti-smoking images: an fMRI study. |
| 16081255 | How do we modulate our emotions? Parametric fMRI reveals cortical midline structures as regions specifically involved in the processing of emotional valences. |
| 18926523 | Neural correlates of message tailoring and self-relatedness in smoking cessation programming. |
| 22406357 | The neural correlates of subjective pleasantness. |
| 16764897 | Us versus them: Political attitudes and party affiliation influence neural response to faces of presidential candidates. |
| 18570205 | Parsing neural mechanisms of social and physical risk identifications. |
| 16230029 | Segregated neural representation of distinct emotion dimensions in the prefrontal cortex-an fMRI study. |
| 21642353 | Response inhibition results in the emotional devaluation of faces: neural correlates as revealed by fMRI. |
| 22287188 | The social evaluation of faces: a meta-analysis of functional neuroimaging studies. |
| 21229613 | Reward and motivation systems: a brain mapping study of early-stage intense romantic love in Chinese participants. |
| 19879365 | Neural mechanisms of the influence of popularity on adolescent ratings of music. |
| 25165065 | Dissociating Bottom-Up and Top-Down Mechanisms in the Cortico-Limbic System during Emotion Processing. |
| 23746615 | The influence of combined cognitive plus social-cognitive training on amygdala response during face emotion recognition in schizophrenia. |

Supplemental table 13

Studies closest to the “barycenter” of cluster 6

| PubMed | Title |
|---------------|---|
| 22438288 | Interaction between effects of genes coding for dopamine and glutamate transmission on striatal and parahippocampal function. |
| 22368081 | A gene-brain-cognition pathway: prefrontal activity mediates the effect of COMT on cognitive control and IQ. |
| 22032950 | The impact of serotonin transporter (5-HTTLPR) genotype on the development of resting-state functional connectivity in children and adolescents: a preliminary report. |
| 19650139 | Impact of schizophrenia-risk gene dysbindin 1 on brain activation in bilateral middle frontal gyrus during a working memory task in healthy individuals. |
| 18234415 | A functional variant of the tryptophan hydroxylase 2 gene impacts working memory: a genetic imaging study. |
| 22947540 | The dopamine D2 receptor gene DRD2 and the nicotinic acetylcholine receptor gene CHRNA4 interact on striatal gray matter volume: evidence from a genetic imaging study. |
| 16202396 | Monoamine oxidase-a genetic variations influence brain activity associated with inhibitory control: new insight into the neural correlates of impulsivity. |
| 23620758 | Modulatory effects of the piccolo genotype on emotional memory in health and depression. |
| 19046394 | Association of the SerCys DISC1 polymorphism with human hippocampal formation gray matter and function during memory encoding. |
| 21232548 | fMRI activation during response inhibition and error processing: the role of the DAT1 gene in typically developing adolescents and those diagnosed with ADHD. |
| 19878929 | Baseline brain perfusion and the serotonin transporter promoter polymorphism. |
| 21596533 | Relationship of DAT1 and adult ADHD to task-positive and task-negative working memory networks. |
| 22227051 | The NOS1 variant rs6490121 is associated with variation in prefrontal function and grey matter density in healthy individuals. |
| 22699906 | Gender modulates the APOE epsilon4 effect in healthy older adults: convergent evidence from functional brain connectivity and spinal fluid tau levels. |
| 17481593 | Genetic variation in serotonin transporter alters resting brain function in healthy individuals. |
| 22749356 | The dopamine transporter haplotype and reward-related striatal responses in adult ADHD. |
| 23437284 | CACNA1C risk variant and amygdala activity in bipolar disorder, schizophrenia and healthy controls. |
| 24361663 | Effects of MIR137 on fronto-amygdala functional connectivity. |
| 22398981 | Eye-of-the-Tiger sign is not Pathognomonic of Pantothenate Kinase-Associated Neurodegeneration in Adult Cases. |
| 21397462 | Neural hyperactivation in carriers of the Alzheimer's risk variant on the clusterin gene. |

Supplemental table 14

Most average and unique studies and words.

| PubMed | Cluster | Title |
|---------------|----------------|--|
| 19327402 | 4 | Understanding why patients with schizophrenia do not perceive the hollow-mask illusion using dynamic causal modelling. |
| 22542844 | 4 | Decreased functional brain activation in Friedreich ataxia using the Simon effect task. |
| 16650836 | 4 | Individual differences in the functional neuroanatomy of inhibitory control. |
| 20080151 | 4 | Activation of the limbic system under 30% oxygen during a visuospatial task: an fMRI study. |
| 22578707 | 4 | Aging effects on functional auditory and visual processing using fMRI with variable sensory loading. |
| 18072271 | 4 | Aging and the interaction of sensory cortical function and structure. |
| 21888982 | 2 | Do distinct atypical cortical networks process biological motion information in adults with Autism Spectrum Disorders? |
| 20153764 | 2 | Coherent motion processing in autism spectrum disorder (ASD): an fMRI study. |
| 18708149 | 2 | Developmental changes in neural activation and psychophysiological interaction patterns of brain regions associated with interference control and time perception. |
| 15907308 | 4 | Objective evidence of cognitive complaints in Chronic Fatigue Syndrome: a BOLD fMRI study of verbal working memory. |
| 22194902 | 2 | How doctors generate diagnostic hypotheses: a study of radiological diagnosis with functional magnetic resonance imaging. |
| 16488627 | 4 | A rapid fMRI task battery for mapping of visual, motor, cognitive, and emotional function. |
| 23935850 | 2 | Affect and the brain's functional organization: a resting-state connectivity approach. |
| 23251496 | 2 | Investigating neural efficiency in the visuo-spatial domain: an FMRI study. |
| 15006653 | 2 | Segregation of cognitive and emotional function in the prefrontal cortex: a stereotactic meta-analysis. |
| 20035830 | 4 | Functional neuroimaging of duration discrimination on two different time scales. |
| 18095280 | 2 | Differential patterns of cortical activation as a function of fluid reasoning complexity. |
| 15936178 | 2 | Functional changes in the activity of brain regions underlying emotion processing in the elderly. |
| 15734350 | 2 | An fMRI study of joint attention experience. |
| 14561452 | 2 | Functional anatomy of impaired selective attention and compensatory processing in autism. |

(a) Studies closest to global barycenter (origin).

| PubMed | Cluster | Title |
|----------|---------|---|
| 23748501 | 6 | COMT Val158Met x SLC6A4 5-HTTLPR interaction impacts on gray matter volume of regions supporting emotion processing. |
| 17689985 | 6 | Impact of the COMT Val108/158 Met and DAT genotypes on prefrontal function in healthy subjects. |
| 18252743 | 6 | COMT val158met genotype affects recruitment of neural mechanisms supporting fluid intelligence. |
| 23859480 | 6 | Modulating effect of COMT genotype on the brain regions underlying proactive control process during inhibition. |
| 19054502 | 6 | Opposite effects of catechol-O-methyltransferase Val158Met on cortical function in healthy subjects and patients with schizophrenia. |
| 24384148 | 6 | Structural neuroimaging correlates of allelic variation of the BDNF val66met polymorphism. |
| 18988738 | 6 | MTHFR 677C --> T genotype disrupts prefrontal function in schizophrenia through an interaction with COMT 158Val --> Met. |
| 17483451 | 6 | Gene-gene interaction associated with neural reward sensitivity. |
| 19641018 | 6 | COMT val108/158 met genotype affects neural but not cognitive processing in healthy individuals. |
| 22387174 | 6 | Catechol-O-methyltransferase gene variation: impact on amygdala response to aversive stimuli. |
| 16330500 | 6 | The association between the Val158Met polymorphism of the catechol-O-methyl transferase gene and morphological abnormalities of the brain in chronic schizophrenia. |
| 21156209 | 6 | COMT Val158Met polymorphism, verbalizing of emotion and activation of affective brain systems. |
| 19666577 | 6 | Epistasis between the DAT 3' UTR VNTR and the COMT Val158Met SNP on cortical function in healthy subjects and patients with schizophrenia. |
| 18634888 | 6 | Catechol-O-methyltransferase val158met genotype influences neural processing of reward anticipation. |
| 18423780 | 6 | Prion protein M129V polymorphism affects retrieval-related brain activity. |
| 19482231 | 6 | Influence of SLC6A3 and COMT variation on neural activation during response inhibition. |
| 17360197 | 3 | Representation of cold allodynia in the human brain--a functional MRI study. |
| 21514925 | 6 | Influence of the COMT genotype on working memory and brain activity changes during development. |
| 16857316 | 6 | The COMT val158met polymorphism and brain morphometry in healthy young adults. |
| 22306803 | 6 | Interaction of COMT val158met and externalizing behavior: relation to prefrontal brain activity and behavioral performance. |

(b) Studies furthest from global barycenter (origin).

| Word | Cluster |
|-------------|----------------|
| demonstr | 4 |
| result | 4 |
| possibl | 4 |
| presenc | 4 |
| investig | 4 |
| studi | 4 |
| consid | 4 |
| begin | 4 |
| remain | 4 |
| shown | 4 |
| explor | 4 |
| addit | 4 |
| reveal | 4 |
| evid | 4 |
| establish | 4 |
| known | 4 |
| explain | 2 |
| reson | 5 |
| magnet | 4 |
| function | 4 |

(c) Words closest to global barycenter (origin).

| Word | Cluster |
|----------------|----------------|
| val | 6 |
| comt | 6 |
| catechol | 6 |
| methyltransfer | 6 |
| as | |
| valmet | 6 |
| met | 6 |
| bdnf | 6 |
| dat | 6 |
| polymorph | 6 |
| enzym | 6 |
| homozyg | 6 |
| httlpr | 6 |
| genotyp | 6 |
| allodynia | 3 |
| cold | 3 |
| allel | 6 |
| neurotroph | 6 |
| homozygot | 6 |
| innocu | 3 |
| brush | 3 |

(d) Words furthest from global barycenter (origin).

Supplemental table 15

Psychiatric and neurological terms

| Word | Cluster | Freq. | Type | C1 | C2 | C3 | C4 | C5 |
|---------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| adhd | 2 | 580 | psychiatric | <i>-1.22</i> | <i>-0.23</i> | 0.45 | 0.48 | 0.08 |
| autism | 2 | 468 | psychiatric | <i>-0.41</i> | <i>-0.12</i> | 0.56 | <i>-0.53</i> | 0.21 |
| bipolar | 2 | 382 | psychiatric | <i>-1.7</i> | <i>-0.04</i> | 0.68 | <i>-0.4</i> | 0.02 |
| unipolar | 2 | 38 | psychiatric | <i>-1.41</i> | <i>-0.61</i> | 0.28 | <i>-0.36</i> | 0.07 |
| anorexia | 5 | 56 | psychiatric | <i>-0.77</i> | <i>-0.74</i> | <i>-0.12</i> | <i>-0.98</i> | 0.24 |
| depress | 2 | 1487 | psychiatric | <i>-1.36</i> | <i>-0.66</i> | 0.31 | <i>-0.27</i> | <i>-0.17</i> |
| antidepress | 2 | 112 | psychiatric | <i>-1.42</i> | <i>-0.81</i> | <i>-0.12</i> | <i>-0.12</i> | <i>-0.33</i> |
| obsess | 2 | 113 | psychiatric | <i>-1.5</i> | <i>-0.26</i> | 0.19 | <i>-0.17</i> | 0.3 |
| schizophrenia | 2 | 2250 | psychiatric | <i>-1.12</i> | 0.17 | 0.58 | <i>-0.01</i> | 0.02 |
| posttraumat | 5 | 72 | psychiatric | <i>-1.3</i> | <i>-0.99</i> | 0.21 | <i>-1.11</i> | 0.01 |
| traumat | 2 | 151 | psychiatric | <i>-1.24</i> | <i>-0.42</i> | 0.22 | <i>-0.78</i> | 0.18 |
| alzheim | 2 | 409 | neurological | <i>-1.28</i> | 0.67 | 0.52 | 0.72 | 0.28 |
| dementia | 2 | 250 | neurological | <i>-1.27</i> | 0.76 | 0.76 | 0.29 | 0.31 |
| frontotempor | 2 | 131 | neurological | <i>-0.76</i> | 0.63 | 0.8 | <i>-0.27</i> | <i>-0.12</i> |
| dystonia | 6 | 62 | neurological | <i>-1.05</i> | 0.75 | <i>-0.61</i> | 1.01 | <i>-1.64</i> |
| parkinson | 2 | 232 | neurological | <i>-0.88</i> | 0.47 | <i>-0.42</i> | 0.64 | 0.04 |
| huntington | 2 | 29 | neurological | <i>-1.15</i> | 0.33 | 0.03 | 0.22 | <i>-0.13</i> |
| epilepsi | 2 | 277 | neurological | <i>-1.21</i> | 1.35 | <i>-0.3</i> | 0.33 | 0.76 |

Note. Psychiatric vs. neurological terms (as defined by Crossley et al., 2015) within our components solution. Negative loadings are *italicized*. Components 2 and 4 show a clear dissociation between psychiatric and neurological disorders within the semantic space of Neurosynth.

Supplemental table 16

Illustration of discrepant terms

| Terms | Cluster | Terms | Cluster |
|--|----------------|--|----------------|
| <i>traumat, heroin, cannabi, comorbid, antidepress, depress, dsm, spectrum</i> | 2 | <i>appetit, crave, discount, smoke, smoker, trait, eat, posttraumat, stress, distress, riski, reward, nicotin, abus, cocain, trauma, addict, alcohol, marijuana, food, gambl</i> | 5 |

(a) Substance use disorder related terms

| Terms | Cluster | Terms | Cluster |
|---|----------------|---|----------------|
| <i>amnes, amnesia, episod, hippocampus, hippocampi, hippocamp, parahippocamp, parahippocampus</i> | 2 | <i>autobiograph, memor, memori, novelti, recal, recogn, recollect, recenc</i> | 4 |

(b) Memory related terms

Note. Illustration of words that could be expected together in single clusters but are not. For example, “heroin” and “cannabi” (short for cannabis) do not appear in the same cluster as “addict” nor “alcohol”, nor even “marijuana”. Similarly, many memory terms are not in the same cluster as the typical brain regions in memory studies (e.g., hippocampus). These differences highlight barriers towards standard ontologies as they reflect either terms that could be used quite broadly across many domains (e.g., recollect), or show a development of how terminology changes over time (e.g., cannabis vs. marijuana; {dsm, spectrum} vs. trait).