Table e-1: Meta-analysis Dataset

Study ID	Reference	Modality	Language	Control N	Aphasic N	IF+ N	Months since Stroke: Median (Range)	Fluency	Task	Control	Comments	Control Foci	Aphasic Foci	Narrative Description of Studies
1a	e-1	fMRI	American English	4	1	1	48	Nonfluent	Picture Naming	Fixation	Patient 1; All responses anal	12	10	This study used a single trial design to separate activity during correct and incorrect naming responses and relate activity to item attributes. Typical bilateral activation patterns were observed, but RH activity occurred more during incorrect responses. The authors conclude that "right frontal overactivation may reflect ineffective effort when left hemisphere perilesional resources are insufficient" and that RH areas play a "dysfunctional" role in chronic aphasic patients.
1b		fMRI	American English	(1)	"	"			Picture Naming	Fixation	Control 1, Patient 1; AOA anal	(8)	(13)	
1c		fMRI	American English	"	"	"			Picture Naming	Fixation	Control 1, Patient 1; Names/Target anal	(6)	(10)	
1a		fMRI	American English	"	1	1	108	Nonfluent	Picture Naming	Fixation	Patient 2; All responses anal	-	10	
1b		fMRI	American English	(1)	"	"			Picture Naming	Fixation	Control 2, Patient 2; AOA anal	(6)	(3)	
1c		fMRI	American English	"	"	"			Picture Naming	Fixation	Control 2, Patient 2; Names/Target anal	(2)	(5)	
1a		fMRI	American English	"	1	1	48	Nonfluent	Picture Naming	Fixation	Patient 3; All responses anal	-	11	
1b		fMRI	American English	(1)	"	"			Picture Naming	Fixation	Control 3, Patient 3; AOA anal	(9)	(12)	
1c		fMRI	American English	"	"	"			Picture Naming	Fixation	Control 3, Patient 3; Names/Target anal	(2)	(9)	
1b		fMRI	American English	(1)	-	-			Picture Naming	Fixation	Control 4; AOA anal	(7)	-	
1c		fMRI	American English	"	-	-			Picture Naming	Fixation	Control 1; Names/Target anal	(11)	-	
2a	e-2	fMRI	American English	14	1	1	36	Nonfluent	Lexical Decision (Nouns+Verbs)	Fixation	Nouns/verbs collapsed; Patient a1	38	7	This study examined verb argument structure in aphasia. Typical bilateral activations were observed for task-vs-baseline contrasts. Verb argument structure related to bilateral angular gyrus activity in controls, but only right angular gyrus in aphasic patients. The authors conclude that processing verb argument structure involves posterior brain regions.
2b		fMRI	American English	"	"	"			Lexical Decision (Nouns+Verbs)	Fixation	v3-v1 analysis; Patient a1	(1)	(3)	
2b		fMRI	American English	"	1	0	108	Nonfluent	Lexical Decision (Nouns+Verbs)	Fixation	v3-v1 analysis; Patient a2	"	(3)	
2b		fMRI	American English	"	1	1	48	Nonfluent	Lexical Decision (Nouns+Verbs)	Fixation	v3-v1 analysis; Patient a3	"	(1)	
2a		fMRI	American English	"	1	1	120	Nonfluent	Lexical Decision (Nouns+Verbs)	Fixation	Nouns/verbs collapsed; Patient a4	"	3	
2b		fMRI	American English	"	"	"			Lexical Decision (Nouns+Verbs)	Fixation	v3-v1 analysis; Patient a4	"	(2)	
3a	e-3	fMRI	German	8	16	14	>12	Nonfluent	Word Reading	Fixation	Pre-therapy scan	4	7	This study evaluated changes in activity after constraint-induced aphasia therapy. Right IFG activity predicted success of therapy, which correlated with decreasing right IFG activity. The authors conclude that right IFG activity is associated with "less effective strategies for language processing."
3b		fMRI	German	"	"	"			Word Stem Completion	Fixation	Pre-therapy scan	7	5	
4	e-4	fMRI	German	14	14	5	11.3 (3.4-17.1)	9 Nonfluent	Intelligible Speech discrimination	Reversed Speech	Acute/subacute patient scans excluded	9	7	This is a longitudinal study examining changes in activity from the acute to the chronic phase of aphasia. Typical RH homotopic activity dominated in the subacute phase, which related to improvement in language. Chronically, activity shifted back to spared LH areas. The authors conclude that recovery is a dynamic process involving productive recruitment of both the RH and LH at different times.
5	e-5	fMRI	British English	18	9	3	38 (13-95)	Unknown	Listening to Stories	Reversed Speech	Control Patients	19	16	This study compared patients with an without Wernicke's area lesions in their activity during speech perception. Bilateral temporal lobe activity was seen in both groups of aphasic patients, but left anterior temporal areas were less active when Wernicke's area was lesioned. The authors conclude that the role of anterior temporal cortex in speech comprehension has been underestimated.
5		fMRI	British English	"	8	5	26.5 (4-125)	Unknown	Listening to Stories	Reversed Speech	Temoral Patients	"	8	
6a	e-6	PET	British English	12	7	7	39 (19-134)	Nonfluent	Propositional Speech Production	Rest ("Nonspeech")	POp+ Patients	11	9	This study compared activity during speech production in patients with and without POp lesions. Activity in the right POp was only observed for patients with lesions to the left POp. The authors conclude that a left POp lesion induces a change in function of the right POp, but stop short of interpreting this activity as either productive or maladaptive.
6b		PET	British English	"	"	"			Propositional Speech Production	Counting	POp+ Patients	(13)	(6)	
6a		PET	British English	"	7	7	17 (6-240)	Nonfluent	Propositional Speech Production	Rest ("Nonspeech")	Pop- Patients	"	10	
6b		PET	British English	"	"	"			Propositional Speech Production	Counting	Pop- Patients	"	(8)	
7	e-7	PET	French	6	8	2	12.6 (10.7-15.3)	1 Nonfluent	Verb/Noun Generation	Rest	Subacute patient scan excluded	13	13	This study evalulated changes in activity from the subacute to the chronic phase of aphasia. Bilateral perisylvian activity increased over this period. Bilateral STG activity changes correlated with improved performance.
8a	e-8	fMRI	Italian	10	1	0	12	Fluent	Phonemic Fluency	Rest	Patient 1	21	4	This study evaluated activity for word retrieval tasks (phonemic and semantic fluency) in aphasia. Both tasks resulted in bilateral frontal activity, more extensive for semantic fluency. Phonemic fluency performance was related to activity in Broca's area or the RH homotopic site. The authors conclude that phonemic fluency depends on left IFG when it is intact, and right IFG when the left is lesioned.
8b		fMRI	Italian	"	"	"			Semantic Fluency	Rest	Patient 1	18	15	
8a		fMRI	Italian	"	1	1	12	Fluent	Phonemic Fluency	Rest	Patient 2	"	6	
8b		fMRI	Italian	"	"	"			Semantic Fluency	Rest	Patient 2	"	11	
8b		fMRI	Italian	"	1	0	10	Fluent	Semantic Fluency	Rest	Patient 3	"	7	
8b		fMRI	Italian	"	1	0	24	Nonfluent	Semantic Fluency	Rest	Patient 4	"	9	
9	e-9	fMRI	American English	14	8	8	>6	Nonfluent	Word Stem Completion (Novel Items)	Repeat Items	-	9	5	This study examined changes in activity during a verbal learning task in aphasic patients. Learning was associated with decreased responses in right frontal and occipital cortex. The authors conclude that the RH serves a compensatory role in aphasia recovery.
10a	e-10	fMRI	American English	8	6	6	46.9 (10.7-117.5)	Nonfluent	Silent Word Stem Completion	Fixation	-	6	6	This study examined lexical processing activity in patients with left IFG lesions. Increased activity was seen in the right IFG, which did not correlate with performance. Perilesional LH activity was observed in the two highest performing patients. The authors conclude that LH sparing is functionally important, and RH activity results from alternate behavioral strategies or "an anomalous response caused by removal of the left IFG."
10b		PET	American English	6	"	"			Alound Word Stem Completion	Fixation	-	5	6	
11	e-11	PET	British English	4	1	0	Unkown (6-14)	Fluent	Verb Generation	Rest	L & R Control group; Patient 1	8	4	This study examined activity in aphasic patients during verb generation. A left lateralized pattern of activity was seen in controls although some RH activity was seen. A rightward shift in activity was not seen in aphasics. The authors conclude that perilesional LH tissue is important for recovery from aphasia.
11		PET	British English	5	1	0	Unkown (6-14)	Fluent	Verb Generation	Rest	L only Control group Patient 2	6	6	
11		PET	British English	"	1	0	Unkown (6-14)	Fluent	Verb Generation	Rest	Patient 4	"	6	
11		PET	British English	"	1	0	Unkown (6-14)	Fluent	Verb Generation	Rest	Patient 5	"	6	
11		PET	British English	"	1	1	Unkown (6-14)	Fluent	Verb Generation	Rest	Patient 6	"	5	
12a	e-12	PET	German	6	6	0	30.5 (5-117)	Fluent	Verb Generation	Rest	-	7	7	This study examined activity during verb generation in patients with recovered Wernicke's aphasia. In aphasic patients, LH activity was seen in spared frontal areas. RH areas homotopic to normal language areas were also active. The authors conclude that recovery from aphasia relies on recruitment of a pre-existing bilateral network of brain regions.
12b		PET	German	"	"	"			Pseudoword Repetition	Rest	-	4	5	
12c		PET	German	"	"	"			Verb Generation	Pseudoword Repetition	-	(3)	(3)	
12d		PET	German	"	"	"			Pseudoword Repetition	Verb Generation	-	(2)	(1)	