RelIE	FeatID	Interpreted Function	Languages
Comparison: 550M 6B			
550M specific			
0.00	8760	Detects administrative/government-related nouns	fra
0.00	14133	Detects nouns and verbs that convey key actions, entities, or ideas in a sentence	eng
0.05	12275	Detects conjunction token *et*	fra
0.10	8341	Detects subtoken *et* typically conjunction but also for *et al.*	fra
0.20	15852	Detects head nouns and their modifiers that signal prominent participants or components	fra
0.22	14697	Detects plural nouns, promotes plural verb conjugation and *who* pronoun	eng,fra,spa
550M-6B shared			
0.36	1474	Detects plural French articles (, *les*, *nos*, *certains*), promotes plural single token noun completions	fra
0.39	8223	Promotes *-age* completion for nouns	eng,fra,spa
0.44	7882	Detects English relative pronoun *that*, promotoes pronoun follow ups	eng
0.69	14645	Detects *Ev* at BOS, to be completed with French adverbs or nouns	fra
6B specific			
0.95	12523	-	-
0.96	10853	Detects noun and nominal expressions representing abstract entities, events, or processes	eng,fra,por,spa
0.97	2189	Detects multi-word nouns (, compound nouns or with adjectives)	eng,fra,por,spa
1.00	9386	-	-
1.00	9813	*who* and *that* detector	arb,eng,fra,por,spa
1.00	10337	Punctuation and newline detector	arb,eng,fra,por,spa
1.00	14067	-	-
1.00	15428	Detects verbs with the concept to like/love/appreciate	eng,fra,hin*,por,spa
Comparison: 6B 55B			
6B specific			
0.00	11469	Detects punctuation and newline	eng,fra,spa
0.17	942	Verbs that depict dynamic, agentive actions	eng
0.20	10311	Detects *ev* or *Ev* tokens to be completed with french adverbs or nouns	fra
0.28	15632	Detects verbs with the concept to like/love/appreciate	arb*,eng,fra,por,spa
6B-55B shared			
0.31	11920	Detects head of noun phrases denoting concrete or informational entities (,*data*, *system*, *text*)	eng,fra,por,spa
0.32	12000	Detects noun that depict occupational or social roles like researchers, engineers, physician, and journalists	arb*,eng,fra,hin*,por,spa
0.32	2792	-	-
0.38	14748	-	-
0.40	5763	Detects the concept boss in different languages (, *chef*, *boss*, *jefe*) probably because it is a common noun in the IE dataset	eng,fra,spa
0.56	9817	Detects verbs and promotes preposition/conjunction/punctuation	eng,fra,por,spa
0.56	425	Detects relative pronoun and prepositions (, *that*, *que*, *at*, *of*, *de*)	eng,fra,spa
0.59	4863	Detects relative pronoun *that* and promotes verb/pronoun completions	eng
55B specific			
0.79	5345	Nouns and verbs related to consultants and consulting	arb*,eng,fra,por,spa
Comparison: 55B 341B			
55B specific			
0.27	15249	Nouns and verbs related to consultants and consulting	arb*,eng,fra,por,spa
0.27	12734	-	-
55B-341B shared			
0.35	11458	Detects *that* and promotes verb or pronoun completion in English	eng
0.39	11920	Detects nouns to be completed by *de*, *of*	eng,fra,por,spa
0.39	7339	Determiners and quantifiers in noun phrases, such as articles (, *a*, *os*), possessives (our), and universal quantifiers (every, todo, cada)	eng,por,spa
0.44	6063	Detects the concept boss in different languages (, *chef*, *boss*, *jefe*) probably because it is a common noun in the IE dataset and promotes *of* (, *de*, *do*, *du*) completions	eng,fra,por,spa
0.48	15083	Relative pronouns and the syntactic material inside relative clauses	eng,fra,por,spa
0.54	10325	Detects *ev* or *Ev* tokens to be completed with french adverbs or nouns	fra,por,spa
0.55	425	Detects relative pronouns/subordinators (, *that*, *que*, *qui*, *which*, *who*, *où*) to introduce a new clause; also activates on the verbs inside the subordinate clause	arb*,eng,fra,por,spa
0.57	8729	-	-
341B specific			
1.00	794	-	-
1.00	7419	Detects newlines in different languages	arb,fra,hin,por,spa
1.00	7806	-	-
1.00	13276	-	-
1.00	13404	Sentence-boundary detector through punctuation and other delimiters	arb,fra,por,spa,zh

Table 1: **2-way L1-Sparsity Crosscoder CLAMS French/English Annotation for BLOOM-1B.** Each block is one pairwise comparison. is sorted from 0.00 to 1.00, where ¡ 0.3 gets attributed to the first checkpoint; ¿ 0.7 to second; shared otherwise). Interpreted function gives a description if a linguistic role was detected, "–" otherwise. Languages lists which languages the feature highly activates on, * means that the activation was relatively less common. While earlier checkpoints (, 550M) capture language specific low-level function words, later checkpoints (, 55B and 341B) increasingly share such features across languages.