

Table 1.

Dictionary Summary of C-MFD 2.0

Moral Foundations	Number of words	Examples
care/harm	1,477	□□, □□, □□, □□□□, □□, □□, □□□□, □杀, □□, □□
authority/subversion	1,415	□□, □□, □□, □□, □□, □□, □□, □□, □□, □□
loyalty/betrayal	698	□□□□, □□, □□□□, □□, □□, □□□□, □□, □□□敌, □□□□, □□
fairness/cheating	1,023	□□□□, □□, □□□□, □□, □□□□, □□, □□, □□□□, □□□□, □□□□
sanctity/degradation	894	□□, □□, □□□□, □□, □□, □□□□, □□, □□, □□□□, □□
liberty/oppression	50	□□□□, □□, □□, □□, □□□□, □□□□, □□, □□, □□□□, □□
waste/efficiency	83	□□□□, □□□□, □□, □□, □□□□, □□, □□, □□, □□□□, □□
altruism/selfishness	85	□□□□, □□, □□, □□, □□□□, □□, □□□□, □□□□, □□□□, □□□□
diligence/laziness	41	□□□□, □□, □□, □□, □□□□, □□□□, □□□□, □□, □□, □□
resilience/weakness	63	□□□□, □□, □□□□, □□, □□□□, □□, □□, □□□□, □□□□, □□□□
modesty/arrogance	75	□□, □□□□, □□, □□□□, □□, □□□□, □□□□, □□□□, □□, □□□□
general	234	□□□□, □□□□, □□, □□, □□□□, □□□□, □□□□, □□, □□, □□□□
Total	6,138	

Table 2.*Word Density Analysis of C-MFD 2.0 on the Crowd-sourced Texts*

		Accuracy	Precision	Recall	F1 score	Coverage
Five Foundation Model						
	<i>care/harm</i>	0.88	0.73	0.42	0.53	0.84
	<i>authority/subversion</i>	0.90	0.79	0.46	0.58	0.92
	<i>loyalty/betrayal</i>	0.93	0.66	0.62	0.64	0.90
	<i>fairness/cheating</i>	0.94	0.60	0.71	0.65	0.85
	<i>sanctity/degradation</i>	0.95	0.62	0.76	0.69	0.88
Foundation Candidates						
	<i>liberty/oppression</i>	0.95	0.50	0.97	0.66	0.75
	<i>waste/efficiency</i>	0.95	0.53	0.92	0.68	0.74
	<i>altruism/selfishness</i>	0.93	0.29	0.86	0.44	0.82
	<i>diligence/laziness</i>	0.94	0.32	0.97	0.48	0.50
	<i>resilience/weakness</i>	0.93	0.31	0.93	0.46	0.78
	<i>modesty/arrogance</i>	0.94	0.39	0.94	0.55	0.74
Average						
	<i>Five Foundation Model</i>	0.92	0.68	0.59	0.62	0.88
	<i>Foundation Candidate</i>	0.94	0.39	0.93	0.54	0.72

Note: Accuracy is the ratio of true predictions (including true positive and true negative) over all predictions. Precision is the ratio of true positives among all positives. Recall measures the ratio of true positives over the sum of true positives and false negatives. The F1 score measures the harmonic mean of the precision and recall, providing a weighted figure to evaluate the dictionary performance. And coverage measures how many labelled texts in the pool are successfully detected by the dictionary.

Table 3.*Benchmark the performance of C-MFD 2.0 against C-MFD 1.0 (Wu et al., 2019)*

	Accuracy		Coverage		F1 Score	
	C-MFD 1.0	C-MFD 2.0	C-MFD 1.0	C-MFD 2.0	C-MFD 1.0	C-MFD 2.0
care/harm	0.76	0.88	0.69	0.84	0.43	0.53
authority/subversion	0.80	0.90	0.79	0.92	0.54	0.58
loyalty/betrayal	0.86	0.93	0.77	0.90	0.59	0.64
fairness/cheating	0.87	0.94	0.67	0.85	0.56	0.65
sanctity/degradation	0.89	0.95	0.67	0.88	0.61	0.69
Average	0.84	0.92	0.72	0.88	0.55	0.62

Note:

1. Accuracy means the ratio of one moral foundation (e.g., care) being correctly identified (including both true-positive and true-negative) to all crowd-generated texts. Higher accuracy means the dictionary is able to detect both care and not-care texts. For example, .88 means if a text is (not) categorized as "care", the decision is 88% likely to be correct.
2. Coverage refers to how many moral-relevant texts can be identified by C-MFD 2.0. For example,.88 coverage means that if a text expresses moral values, there is 88% chance that our dictionary can detect it from the word use.
3. F1 score measures the harmonic mean of the precision and recall (see Table 2 for their definitions), providing a weighted figure to evaluate the dictionary performance.
4. Wu, S., Yang, C., & Zhang, Y. (2019). The Chinese Version of Moral Foundations Dictionary: A Brief Introduction and Pilot Analysis. ChinaXiv:201911.00002. (ChinaXiv:201911.00002).