

Appendix A. Shannon's Diversity Index Calculation

raw data

emoji responses
valence rating

-1	-1	0	3	3	2	0	-1	-1	-1

filtered data

unique emojis
frequency of unique emojis

1	2	2	1	2	1	1		neg
								neut
								pos

number of unique and total emojis per valence category

	total	neg	neut	pos
number unique emojis per valence category	7	4	1	2
total number emojis per valence category	10	5	2	3

variety score

variety score per valence category	0.819	0.440	0.140	0.240
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shannon's diversity index

negative variety calculation in excel
breakdown

$$H = - \sum (n/N) \log (n/N)$$

$$= - (3*(1/10)*\text{LOG}(1/10)) - (1*(2/10)*\text{LOG}(2/10))$$

3 x negative emojis that occur once
1 x negative emoji that occurs twice

neutral variety calculation in excel
breakdown

$$= - 1*(2/10)*\text{LOG}(2/10)$$

1 x neutral emoji that occurs twice

positive variety calculation in excel
breakdown

$$= - (1*(1/10)*\text{LOG}(1/10)) - (1*(2/10)*\text{LOG}(2/10))$$

1 x positive emoji that occurs once
1 x positive emoji that occurs twice

Appendix B. Raw Data Part 1: Age, Gender Identity & Scores on BDI-II, BAI and PAQ Scales

Pcp	Demographics		Covariates		PAQ Total & Subscales					
	Age	Gender	BDI-II	BAI	ALEXI	N-DIF	P-DIF	N-DDF	P-DDF	G-EOT
1	28	female	2	16	48	8	8	8	8	16
2	51	non-binary	5	26	76	10	13	10	12	31
3	22	female	14	11	66	12	12	13	12	17
4	29	male	2	3	55	12	12	8	8	15
5	24	female	13	20	38	8	8	5	7	10
6	46	female	10	14	79	17	18	11	20	13
7	40	female	4	9	44	11	7	7	10	9
8	48	female	8	12	69	10	9	18	14	18
9	47	male	5	5	62	12	8	13	11	18
10	28	female	8	3	66	18	10	12	10	16
11	26	female	6	32	59	8	18	8	13	12
12	34	female	15	7	26	4	4	4	4	10
13	22	female	37	26	81	18	14	19	16	14
14	48	female	9	21	102	17	18	21	19	27
15	37	male	11	2	94	20	12	17	17	28
16	46	female	10	4	68	8	7	19	19	15
17	44	male	4	11	75	18	18	9	12	18
18	34	female	2	15	49	9	7	8	15	10
19	47	male	7	16	44	7	8	7	8	14
20	25	male	7	4	42	8	4	8	4	18
21	34	female	23	31	49	8	8	9	9	15
22	36	female	1	1	42	7	7	6	7	15
23	33	female	1	1	24	4	4	4	4	8
24	25	female	18	14	100	16	21	15	23	25
25	31	female	6	3	75	15	7	18	8	27
26	40	female	9	13	52	10	8	8	8	18
27	25	male	1	0	59	13	12	9	10	15
28	32	female	9	10	88	20	8	24	8	28
29	28	female	28	41	95	18	6	25	16	30
30	51	female	5	6	57	10	9	13	9	16
31	35	male	4	11	28	4	4	4	4	12
32	79	male	8	8	67	10	9	13	11	24
33	79	female	4	1	87	13	13	14	13	34
34	35	male	8	8	89	18	13	21	13	24
35	37	female	7	18	37	12	4	8	4	9
36	39	female	4	3	44	5	4	9	4	22

37	34	male	4	1	45	5	11	8	9	12
38	33	male	10	5	88	15	18	19	20	16
39	38	male	4	8	50	7	8	9	10	16
40	46	female	1	4	45	7	7	8	6	17
41	30	female	4	13	81	16	12	18	12	23
42	28	female	28	13	83	14	10	16	13	30
43	33	female	21	25	113	21	23	21	23	25
44	32	female	6	9	27	4	4	6	4	9
45	37	male	20	9	48	7	7	9	8	17
46	47	female	16	14	48	8	8	8	8	16
47	34	female	6	7	30	5	4	4	4	13
48	39	male	16	8	73	18	9	15	11	20
49	75	male	2	2	61	9	8	9	8	27
50	46	non-binary	9	5	71	18	11	16	12	14
51	34	female	12	6	69	11	9	14	12	23
52	24	female	25	19	38	5	14	4	4	11
53	30	female	22	15	129	21	19	23	21	45
54	35	male	31	13	53	14	8	9	8	14
55	27	female	10	3	73	16	4	16	8	29
56	32	female	9	5	72	17	8	13	8	26
57	40	female	5	13	71	11	10	11	11	28
58	41	female	24	17	91	19	9	22	18	23
59	41	female	5	4	61	14	9	9	8	21
60	37	female	18	7	107	10	16	19	20	42
61	36	female	1	9	88	25	11	19	12	21
62	71	female	15	14	76	19	6	20	7	24
63	36	female	15	19	82	24	11	18	12	17
64	43	female	16	14	62	11	9	10	10	22
65	23	male	21	11	120	21	20	21	20	38
66	21	female	18	16	98	25	8	26	8	31
67	34	female	12	8	24	4	4	4	4	8
68	37	female	2	2	59	10	8	10	8	23
69	28	male	2	4	60	9	10	12	11	18
70	27	female	16	7	85	17	17	18	17	16
71	23	male	2	5	82	12	9	17	17	27
72	32	female	31	32	43	9	13	4	9	8
73	34	female	21	25	59	16	8	13	13	9
74	37	female	4	14	81	18	11	16	12	24

Appendix C. Raw Data Part 2: Emojis & Valence Rating

Pcp Emojis + Valence

1										
	2	0	2	2	1	1	0	1	-1	0
2										
	0	0	0	2	-1	0	0	0	1	1
3										
	2	3	1	2	3	2	1	1	0	1
4										
	1	-1	1	2	1	1	-1	1	2	2
5										
	-1	-1	-2	0	0	0	2	3	1	0
6										
	2	3	3	2	2	-1	1	2	1	2
7										
	-1	2	2	-2	-1	0	-3	2	3	2
8										
	2	3	3	3	-1	0	0	1	3	2
9										
	2	1	-2	-1	-1	-1	2	0	2	2
10										
	-1	-1	0	3	3	2	0	-1	-1	-1
11										
	2	2	0	2	2	3	2	1	1	2

11										
	2	2	0	2	2	3	2	1	1	2
12										
	0	-1	2	-2	1	2	-2	-1	2	3
13										
	0	2	-1	-1	3	-1	2	0	1	-1
14										
	-1	0	1	2	0	0	1	1	2	2
15										
	0	-1	3	1	3	3	3	2	2	2
16										
	-1	2	-1	0	3	3	1	3	3	-1
17										
	0	1	0	2	1	0	0	-1	0	-1
18										
	1	1	0	0	1	2	2	2	2	2
19										
	-1	-1	0	1	2	0	2	1	1	1
20										
	2	0	1	-1	2	0	0	2	1	0
21										
	0	-1	-1	1	2	2	0	1	-2	-2

22										
	1	1	1	2	1	1	2	1	0	-2
23										
	3	1	3	3	2	3	2	2	3	3
24										
	-1	1	2	-2	0	0	-3	1	2	1
25										
	-2	0	2	3	2	-1	-1	1	2	2
26										
	2	3	0	2	1	1	1	1	2	3
27										
	1	3	3	3	3	1	-2	1	1	0
28										
	2	2	1	0	-3	0	2	2	3	3
29										
	2	1	1	-1	0	2	-1	-1	-1	0
30										
	3	3	3	3	3	2	3	3	2	3
31										
	-1	1	0	2	1	1	1	2	1	1
32										
	3	2	3	3	3	3	0	3	3	0

33										
	3	2	0	3	3	1	2	3	3	3
34										
	2	2	1	2	2	2	2	3	0	2
35										
	2	1	0	1	2	1	3	3	3	3
36										
	2	0	0	2	2	1	2	0	2	1
37										
	2	1	2	1	2	1	2	2	0	2
38										
	3	2	2	2	2	0	1	2	-1	2
39										
	2	2	3	3	2	0	3	3	2	-1
40										
	0	1	1	1	-1	1	1	-2	2	1
41										
	2	3	0	0	-2	-1	0	0	0	0
42										
	2	2	2	2	-2	3	0	2	1	2
43										
	-3	-2	-2	-1	3	1	-1	2	1	2

44										
	-1	0	2	1	0	2	2	1	-1	0
45										
	-1	-1	-1	0	2	-1	-1	1	2	2
46										
	1	0	0	1	2	1	0	1	1	3
47										
	1	-2	1	1	2	3	3	3	3	2
48										
	2	-2	2	2	1	1	0	2	1	2
49										
	3	3	3	3	3	2	0	-1	2	3
50										
	-1	-2	-1	1	1	2	2	3	1	-1
51										
	1	1	-2	-1	0	0	-1	0	0	0
52										
	2	2	0	1	0	2	2	3	3	3
53										
	-1	2	-2	2	2	1	1	3	-2	-3
54										
	3	2	2	1	2	3	3	2	3	2

55										
	2	3	0	-1	-2	1	2	-2	1	2
56										
	0	-1	1	1	2	0	0	0	1	1
57										
	-1	0	1	0	2					
58										
	-1	1	2	0	0	0	-1	0	-1	-1
59										
	3	3	1	2	3	-1	1	2	2	3
60										
	3	2	-2	0	1	2	3	0	1	0
61										
	3	3	3	2	1	0	-1	0	1	0
62										
	1	-1	3	2	1	0	-1	-1	-1	1
63										
	-1	1	0	1	-1	-1	0	0	-1	1
64										
	-3	3	3	2	0	-2	-2	-2	2	3

65										
	-1	0	-1	0	0	0	1	1	2	0
66										
	-2	3	-1	3	1	1	2	-3	2	2
67										
	3	3	3	3	2	1	2	-1	2	0
68										
	2	2	2	2	3	1	1	0	2	-1
69										
	1	2	2							
70										
	0	1	0	0	-2	0	-1	1	2	2
71										
	1	3	3	3	2	2	1	0	-1	2
72										
	2	0	0	2	2	2	2	0	-1	3
73										
	0	2	-3	2	1	2	0	2	2	0
74										
	1	0	1	2	1	1	-1	2	2	1

Appendix D. Raw Data Part 2: Words & Valence Rating

Pcp	Words + Valence									
1	nervous	good	peaceful	impatient	happy	happy	apprehensive	bored	indifferent	content
	1	0	1	2	1	1	0	-1	-1	1
2	tired	good	frustrated	good	fine	nervous	anticipatory	stressed	resigned	drunk
	0	1	-1	1	0	-1	1	-1	-1	0
3	calm	content	restless	relaxed	energized	unaccomplished	unbothered	determined	hopeful	happy
	2	3	1	2	3	0	-1	2	2	2
4	restless	content	focused	satisfied	happy	happy	good	frustrated	neutral	anxious
	-1	1	1	1	1	2	1	-1	0	-1
5	tired	unmotivated	anxious	ok	tired	ok	lazy	happy	tired	anxious
	-1	0	-1	0	-1	0	-1	3	-1	-2
6	annoyed	alert	tired	angry	amused	good	breathless	stressed	exasperated	overwhelmed
	-2	-1	-2	-3	3	2	-1	-3	-2	-2
7	hurt	down	comforted	exhausted	unwell	relieved	happy	satisfied	ruffled	overwhelmed
	-1	-2	1	-2	-3	3	1	2	-1	-2
8	sad	content	exasperated	tired	content	upset	calm	stressed	tired	happy
	-1	1	1	-1	2	-3	1	0	2	3
9	tired	happy	happy	relaxed	relaxed	stressed	ok	energised	relaxed	tired
	1	2	2	1	3	-1	0	1	1	0
10	tired	energised	stressed	happy	frustrated	drained	stressed	relaxed	happy	drained
	1	3	-1	2	-2	-2	-1	2	1	-1
11	fabulous	happy	frustrated	anxious	depressed	happy	good	nervous	fabulous	tired
	3	3	0	-2	-1	3	2	-1	3	0
12	content	happy	cheerful	playful	annoyed	frustrated	playful	impatient	grateful	relaxed
	3	3	3	3	-1	-2	3	2	3	2
13	stressed	tired	overwhelmed	exhausted	calm	hopeful	drained	determined	energized	calm
	-2	-2	-3	-2	0	1	-1	1	2	2
14	sad	empty	calm	relaxed	tired	hopeful	relieved	calm	tired	overloaded
	-2	0	0	2	0	2	1	2	1	-1
15	sleepy	lazy	hungry	excited	busy	sleepy	optimistic	stressed	stressed	sleepy
	0	0	0	3	2	0	3	-2	-3	2

16	content	calm	tired	excited	cosy	irritated	content	relaxed	excited	optimistic
	3	3	-1	3	3	-1	2	3	3	3
17	neutral	anxious	calm	peevish	mixed	worried	calm	unsettled	unsettled	nervous
	0	-1	1	-1	0	-1	0	0	0	1
18	positive	fine	good	okay	great	ambivalent	serene	good	placid	positive
	2	1	2	1	2	2	2	2	2	2
19	tired	optimistic	motivated	fab	fabbish	dull	optimistic	ok	frazzled	warm
	-1	2	2	2	1	-1	1	0	-1	2
20	happy	good	good	happy	content	tired	calm	great	tired	tired
	2	1	1	3	0	0	1	3	0	-1
21	tired	neutral	accomplished	apprehensive	unproductive	bruised	cautious	hopeful	depleted	concerned
	-1	0	2	-1	-1	-2	0	1	0	-1
22	energised	hectic	satisfied	tired	good	chilled	disappointed	hungry	alright	tired
	2	1	2	1	2	1	-1	1	1	1
23	grand	good	refreshed	confused	tired	happy	happy	happy	happy	good
	1	2	2	0	0	3	3	3	3	2
24	sleepy	challenged	sad	sad	relieved	sleepy	satisfied	bored	sleepy	happy
	-1	1	-3	-3	2	1	2	-1	-1	3
25	optimistic	anxious	tired	satisfied	content	optimistic	happy	tired	calm	irritable
	2	-1	-1	2	3	2	2	-1	2	-1
26	rushed	procrastinating	tired	stressed	fed-up	rushed	okay	relieved	happy	okay
	1	1	-1	-3	-1	1	2	3	1	3
27	great	happy	calm	good	great	indifferent	good	amused	calm	calm
	3	3	1	1	2	0	1	2	1	3
28	content	happy	exhausted	flustered	good	relaxed	relieved	nervous	worried	overwhelmed
	2	2	-1	-1	3	1	2	-1	-2	-1
29	confused	grateful	scared	tired	satisfied	reluctant	stressed	tired	curious	conflicted
	-1	3	-2	-2	1	-1	-1	0	2	0
30	good	refreshed	blessed	content	content	good	good	relaxed	relaxed	relaxed
	3	3	3	3	3	3	2	3	3	3
31	tired	nervous	energy	talkative	comfortable	tired	stressed	tired	sleepy	ok
	1	0	2	3	2	-1	0	0	-1	1
32	calm	positive	hungry	sleepy	contented	fine	blessed	happy	delighted	pleased
	0	3	3	3	3	3	3	3	3	3

33	tired	concentrating	rested	annoyed	relaxed	optimistic	concerned	sleepy	pensive	relaxed
	-1	3	2	-2	3	3	-2	0	1	2
34	tired	content	creative	relaxed	tired	rushed	pleasant	worked	frustrated	relaxed
	-2	1	1	1	2	1	2	3	-1	2
35	tired	vibrant	achey	sexy	satiated	motivated	excited	deflated	indecisive	achey
	-1	3	-1	3	3	2	3	-2	0	2
36	tired	bored	productive	rushed	forced	pleased	determined	stressed	pleased	pleased
	2	0	2	-1	-2	3	0	-1	1	2
37	sleepy	lighthearted	calm	content	relaxed	cheerful	restless	disappointed	rushed	satisfied
	2	2	3	2	3	2	1	0	1	2
38	content	calm	drowsy	productive	wiped	comfy	inspired	content	dozy	fatigued
	1	2	1	2	1	2	2	2	1	1
39	smitten	replete	refreshed	happy	tired	incoherent	supportive	tired	unmotivated	hopeful
	3	2	2	2	0	0	3	-1	-2	2
40	covidy	positive	worried	tired	restful	fine	excited	tired	hot	content
	-1	2	0	-1	2	1	2	1	1	2
41	fuzzy	hungry	optimistic	focused	settled	heavy	tense	slow	pleased	knackered
	-1	0	2	1	2	-1	-1	-1	2	-1
42	normal	fine	normal	fine	ok	normal	alright	ok	ok	normal
	0	1	2	2	3	1	2	2	2	1
43	tired	content	content	tired	ok	ok	depleted	ok	content	fine
	-1	2	3	0	1	0	1	-1	2	2
44	worried	anxious	excited	calm	worried	peaceful	guilty	rushed	calm	energised
	-1	-1	1	1	-1	1	-1	-1	1	1
45	apprehensive	productive	hurried	achey	sleepy	comfortable	unbalanced	even	achey	listless
	-1	2	0	0	0	1	-1	0	1	-1
46	fat	groggy	relaxed	preoccupied	content	uncertain	worried	relaxed	comfortable	gutted
	-1	-1	1	0	3	1	0	0	1	1
47	thankful	fine	chilled	tired	relaxed	grateful	calm	optimistic	calm	anxious
	1	2	3	1	1	2	3	3	3	0
48	stressed	fulfilled	tired	tired	content	refreshed	anxious	calm	tired	ok
	-1	1	0	0	2	2	0	1	0	1
49	pensive	satisfied	energised	frustrated	comfortable	determined	positive	concerned	comfortable	peaceful
	1	3	3	1	2	2	3	1	2	2

50	wobbly	insecure	lost	broken	nihilistic	overwhelmed	wobbly	pressured	nervous	unsettled
	-2	-2	-3	-3	-3	-2	-1	-1	-1	-1
51	befuddled	unfocused	tired	fine	restless	sleepy	productive	content	fine	interested
	0	0	0	0	0	1	1	1	0	0
52	nervous	unsettled	disturbed	upset	hopeful	confused	confident	anxious	confused	confused
	-2	-2	-2	-1	0	0	2	0	0	0
53	weary	anxious	content	productive	fantastical	stretched	homey	playful	rushed	uplifted
	-1	-2	1	2	3	-1	2	2	-1	2
54	relaxed	content	tired	stressed	relieved	stressed	invigorated	fatigued	tired	calm
	2	2	1	-2	2	-2	2	-2	-1	2
55	happy	optimistic	tired	happy	joyful	apprehensive	happy	tired	motivated	anxious
	2	2	-2	3	2	-2	2	-2	3	-2
56	tired	tired	okay	alright	better	hungry	okay	tired	clumsy	uneasy
	0	-1	1	2	2	1	1	-1	-2	-2
57	anxious	ok	frustrated	tired	guilty	nervous	nervous	busy		
	-1	0	-1	1	-1	-1	-3	0		
58	hopeful	agitated	rushed	curious	anxious	amused	tired	content	excited	concerned
	1	-1	1	1	0	1	0	1	2	-1
59	grateful	excited	happy	happy	tired	stressed	good	chilled	tired	reflective
	3	3	3	3	3	-1	1	2	1	0
60	sleepy	fine	alright	content	high	somnambulant	brainy	antsy	purposeful	elated
	2	2	1	3	3	0	3	0	2	3
61	good	awesome	tired	exhausted	sleepy	content	good	pleased	tired	annoyed
	2	3	0	0	0	1	3	2	0	-1
62	alert	release	satisfied	relaxed	happy	focused	excited	anxious	apprehensive	sad
	2	2	2	2	3	1	2	-1	-1	-2

63	loved	motivated	weary	guilty	consolation	calm	disappointed	frustrated	relaxed	unsure
	2	1	-1	-1	0	1	-1	-3	1	-1
64	flat	full	frantic	elated	fine	amused	happy	okay	worried	wondrous
	0	3	0	3	-1	2	3	1	-1	2
65	tired	good	confused	okay	fine	fine	good	tired	confused	lazy
	1	1	-1	0	1	0	1	0	0	-1
66	happy	alright	excited	hungry	sleepy	sleepy	cold	tired	relaxed	happy
	2	2	3	-1	1	2	2	-3	2	2
67	happy	agitated	tired	content	sad	content	happy	tired	tired	happy
	3	-3	0	3	-2	2	3	-1	-2	3
68	sleepy	edgy	wired	distracted	repose	calm	stable	undisturbed	happy	relieved
	-1	-2	1	-1	2	1	2	2	2	2
69	ok									
	0									
70	relaxed	distracted	unfocused	focused	content	comfortable	productive	lethargic	agitated	satisfied
	1	-1	-2	1	2	2	1	-1	-2	2
71	satisfied	worked	hungry	tired	relaxed	tired	determined	happy	flat	intrigued
	3	1	-1	2	2	-1	2	3	-1	2
72	restless	frustrated	tired	tired	tired	ok	good	peaceful	calm	sleepy
	-1	-1	0	0	-1	0	2	2	1	1
73	hangover	hungry	achey	stiff	tired	thirsty	happy	content	relieved	hectic
	-2	-1	-2	-1	-1	-1	2	2	3	0
74	fine	positive	fatigued	tired	content	unwell	tired	overloaded	content	sunny
	1	2	-1	-1	2	-2	-1	-2	2	2