SUPPLEMENTARY MATERIALS FOR

Using Content Analysis to Characterise the Sensory Typicity and Quality Judgements of Australian Cabernet Sauvignon Wines

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Wine Reviews	Region					Medals					
Categories	Coonawarra	Margaret River	Yarra Valley	Chi-square	*p*-value	Gold	Silver	Bronze	No Medal	Chi-square	*p*-value
Dark Fruits	**72.40%**	**73.21%**	**68.48%**	**5.436**	**0.066**	**82.71%**	**74.57%**	**48.35%**	**33.61%**	**247.096**	**<0.001**
Chemical	1.50%	1.27%	1.04%	0.737	0.692	**0.47%**	**0.73%**	**2.80%**	**7.38%**	**50.823**	**<0.001**
Ripe Fruits	23.67%	21.71%	20.79%	2.190	0.335	**23.36%**	**23.15%**	**17.05%**	**18.03%**	**8.582**	**0.035**
Savoury	16.05%	18.01%	16.74%	1.220	0.543	**14.14%**	**17.52%**	**19.59%**	**22.13%**	**9.385**	**0.025**
Nutty	0.35%	0.58%	0.92%	2.390	0.303	0.47%	0.98%	0.00%	0.00%	6.129	0.105
Smoky	9.24%	9.01%	9.58%	0.174	0.917	9.46%	9.62%	6.87%	12.30%	4.229	0.238
Floral	**8.43%**	**12.70%**	**11.66%**	**8.832**	**0.012**	**14.84%**	**10.84%**	**5.09%**	**3.28%**	**34.533**	**<0.001**
Minty	**24.02%**	**8.78%**	**12.01%**	**87.937**	**<0.001**	**11.80%**	**17.36%**	**16.54%**	**7.38%**	**18.585**	**<0.001**
Eucalyptus	2.54%	3.12%	1.50%	4.990	0.082	1.75%	3.10%	1.78%	1.64%	5.047	0.168
Spicy	8.66%	8.31%	7.62%	0.644	0.725	8.76%	8.31%	7.63%	4.92%	2.293	0.514
Leather	1.96%	1.27%	0.58%	6.630	0.036	0.82%	1.63%	1.02%	1.64%	2.996	0.392
Brett	0.12%	0.23%	0.00%	2.002	0.367	0.12%	0.16%	0.00%	0.00%	0.836	0.841
Earthy	**25.17%**	**17.78%**	**18.48%**	**17.718**	**<0.001**	**17.17%**	**22.66%**	**21.63%**	**18.03%**	**10.087**	**0.018**
Mineral	3.58%	2.08%	2.19%	4.742	0.093	3.39%	2.69%	1.02%	1.64%	6.421	0.093
Liquorice	2.66%	1.50%	1.04%	7.056	0.029	1.75%	1.87%	1.02%	2.46%	1.705	0.636
Oxidative	0.00%	0.00%	0.46%	8.012	0.018	0.00%	0.08%	0.51%	0.82%	8.477	0.037
Red Fruits	**21.02%**	**26.10%**	**25.17%**	**6.937**	**0.031**	**20.68%**	**27.14%**	**24.17%**	**17.21%**	**14.844**	**0.002**
Herbal	**17.21%**	**19.63%**	**21.36%**	**4.830**	**0.089**	**16.00%**	**19.56%**	**25.45%**	**22.13%**	**16.099**	**0.001**
Green	**6.70%**	**7.39%**	**10.85%**	**11.270**	**0.004**	**3.74%**	**6.85%**	**17.56%**	**25.41%**	**117.804**	**<0.001**
Oaky	**66.28%**	**67.90%**	**60.28%**	**12.248**	**0.002**	**77.80%**	**64.79%**	**44.53%**	**39.34%**	**168.956**	**<0.001**
Peppery	3.00%	1.85%	1.15%	7.692	0.021	1.52%	2.12%	2.54%	2.46%	1.825	0.610
Confectionery	0.23%	0.58%	0.69%	2.010	0.366	0.12%	0.65%	0.51%	1.64%	6.275	0.099
Cooked Vegetables	0.23%	0.81%	1.39%	7.201	0.027	0.58%	0.65%	1.53%	1.64%	4.491	0.213
Sweetness	**12.24%**	**9.01%**	**10.16%**	**4.961**	**0.084**	**7.59%**	**11.57%**	**12.98%**	**11.48%**	**11.916**	**0.008**
Leafy	**10.05%**	**15.94%**	**11.89%**	**14.243**	**0.001**	12.27%	13.37%	12.21%	9.02%	2.211	0.530
Citric	0.46%	0.12%	0.46%	2.007	0.367	0.23%	0.33%	0.51%	0.82%	1.422	0.700
Violets	7.74%	9.82%	9.24%	2.452	0.294	**13.20%**	**7.91%**	**4.33%**	**4.10%**	**34.53**	**<0.001**

Table S1. contd.

Wine Reviews	Region					Medals					
Categories	Coonawarra	Margaret River	Yarra Valley	Chi-square	*p*-value	Gold	Silver	Bronze	No Medal	Chi-square	*p*-value
Olives	7.62%	9.82%	5.89%	9.351	0.009	10.63%	7.66%	3.82%	1.64%	24.75	<0.001
Yeasty	3.93%	4.16%	4.16%	0.079	0.961	5.37%	3.50%	3.31%	3.28%	5.499	0.139
Apples	0.35%	0.00%	0.00%	6.007	0.05	0.23%	0.08%	0.00%	0.00%	1.755	0.625
Varietal	8.78%	9.58%	10.16%	0.975	0.614	9.11%	10.02%	10.18%	4.92%	3.729	0.292
Soft	18.59%	23.44%	22.86%	7.170	0.028	21.14%	23.47%	19.85%	12.30%	9.582	0.022
High Acidity	2.54%	2.31%	3.70%	3.450	0.178	1.52%	2.77%	4.58%	7.38%	18.797	<0.001
Fine	20.90%	21.71%	24.36%	3.281	0.194	27.69%	24.21%	9.92%	5.74%	70.905	<0.001
Hotness	1.85%	0.46%	1.27%	7.117	0.028	0.93%	1.55%	0.76%	0.82%	2.56	0.465
Short	1.27%	0.92%	1.73%	2.205	0.332	0.47%	0.90%	3.05%	5.74%	34.098	<0.001
Long	5.77%	7.39%	5.89%	2.369	0.306	7.71%	6.85%	3.31%	1.64%	13.837	0.003
Complexity	10.97%	13.51%	9.93%	5.784	0.055	16.24%	11.74%	3.31%	1.64%	56.645	<0.001
Medium Body	18.94%	22.63%	24.83%	8.903	0.012	21.14%	24.94%	20.36%	6.56%	23.984	<0.001
Firm	13.28%	15.24%	10.05%	10.644	0.005	11.80%	14.83%	11.20%	5.74%	11.618	0.009
Grainy	12.47%	13.16%	12.01%	0.533	0.766	14.37%	14.18%	6.62%	2.46%	29.488	<0.001
Astringency	9.82%	6.00%	7.39%	9.027	0.011	5.49%	7.74%	11.20%	12.30%	16.189	0.001
Balanced	7.04%	7.27%	5.20%	3.696	0.158	6.66%	7.58%	4.33%	1.64%	10.18	0.017
Grippy	3.58%	2.66%	2.42%	2.307	0.316	0.93%	3.59%	4.33%	4.92%	18.474	<0.001
Chewy	2.66%	0.92%	0.81%	12.872	0.002	0.47%	2.04%	1.53%	2.46%	9.549	0.023
Bitterness	2.08%	1.50%	1.96%	0.891	0.640	0.58%	1.87%	3.56%	4.92%	20.255	<0.001
Full Body	13.16%	13.39%	6.35%	28.400	<0.001	13.67%	11.82%	5.34%	1.64%	30.897	<0.001

Table S2. Frequencies of each category for regions and medals based on the expert panel assessment along with the chi-square results and *p*-values (significantly different categories with α = 0.1 with a count of 5 or more are shown in bold). Observed values that are higher than the theoretical value are shown in red and those that are lower are shown in blue.

Expert Panel	Regions						Medals					
Categories	Bordeaux	Coonawarra	Margaret River	Yarra Valley	Chi-square	*p*-value	Gold	Silver	Bronze	No Medal	Chi-square	*p*-value
Dark Fruits	37.27%	39.49%	30.45%	36.82%	5.034	0.169	**49.06%**	**49.10%**	**34.87%**	**26.59%**	**36.745**	**<0.001**
Chemical	4.55%	6.58%	5.91%	8.64%	2.375	0.498	5.66%	7.53%	7.66%	5.74%	1.231	0.746
Ripe Fruits	**18.18%**	**30.13%**	**15.91%**	**27.27%**	**18.657**	**<0.001**	**41.51%**	**21.86%**	**23.37%**	**25.08%**	**9.557**	**0.023**
Savoury	**46.36%**	**18.73%**	**27.73%**	**25.00%**	**35.323**	**<0.001**	32.08%	28.67%	26.44%	21.45%	5.631	0.131
Nutty	5.45%	4.05%	5.00%	4.55%	0.537	0.911	**0.00%**	**5.02%**	**2.68%**	**6.65%**	**7.920**	**0.048**
Smoky	0.91%	1.01%	0.91%	1.36%	0.274	0.965	3.77%	0.36%	0.38%	1.81%	7.793	0.050
Floral	**5.45%**	**7.59%**	**11.82%**	**5.91%**	**6.765**	**0.080**	**18.87%**	**9.68%**	**9.20%**	**3.93%**	**17.52**	**0.001**
Minty	**6.36%**	**17.22%**	**19.09%**	**10.00%**	**15.340**	**0.002**	16.98%	16.13%	18.39%	11.18%	6.571	0.087
Eucalyptus	0.91%	1.52%	2.27%	1.82%	0.943	0.815	1.89%	1.08%	3.45%	0.91%	6.559	0.087
Spicy	11.82%	13.92%	10.00%	14.09%	2.415	0.491	9.43%	14.34%	12.26%	12.69%	1.189	0.756
Leather	**17.27%**	**6.58%**	**4.55%**	**10.45%**	**18.675**	**<0.001**	**24.53%**	**7.17%**	**4.21%**	**10.27%**	**25.799**	**<0.001**
Brett	**14.55%**	**0.76%**	**0.91%**	**1.36%**	**72.707**	**<0.001**	**0.00%**	**0.00%**	**1.15%**	**5.74%**	**25.871**	**<0.001**
Earthy	20.00%	19.24%	12.73%	20.00%	5.452	0.142	**39.62%**	**17.56%**	**10.73%**	**21.45%**	**28.436**	**<0.001**
Mineral	**8.18%**	**1.27%**	**1.82%**	**1.36%**	**20.555**	**<0.001**	**7.55%**	**3.94%**	**1.53%**	**0.60%**	**14.934**	**0.002**
Liquorice	0.91%	1.77%	0.91%	3.64%	5.319	0.150	**5.66%**	**3.23%**	**0.77%**	**1.21%**	**9.065**	**0.028**
Oxidative	2.73%	2.53%	3.64%	1.82%	1.446	0.695	1.89%	2.15%	2.30%	3.32%	1.107	0.775
Red Fruits	47.27%	47.59%	46.36%	44.09%	0.731	0.866	**30.19%**	**48.03%**	**49.43%**	**43.20%**	**8.041**	**0.045**
Herbal	9.09%	12.91%	14.09%	12.73%	1.692	0.639	**11.32%**	**14.70%**	**16.48%**	**7.85%**	**11.552**	**0.009**
Green	17.27%	18.23%	19.55%	15.00%	1.706	0.636	**11.32%**	**10.75%**	**18.39%**	**23.26%**	**18.015**	**<0.001**
Oaky	40.00%	39.24%	32.27%	43.64%	6.216	0.102	**58.49%**	**41.22%**	**39.85%**	**34.44%**	**11.908**	**0.008**
Peppery	2.73%	3.54%	2.27%	4.55%	1.914	0.591	0.00%	1.79%	4.60%	4.53%	6.367	0.095
Confectionery	5.45%	3.54%	5.45%	5.45%	1.890	0.596	0.00%	5.38%	3.83%	5.74%	4.079	0.253
Cooked Vegetables	4.55%	7.85%	6.82%	10.45%	4.056	0.255	1.89%	7.89%	7.66%	8.76%	3.015	0.389
Sweetness	9.09%	16.20%	12.27%	14.55%	4.369	0.224	15.09%	12.90%	14.18%	14.80%	0.510	0.917
Leafy	10.91%	12.41%	12.73%	10.91%	0.544	0.909	20.75%	11.11%	14.18%	10.27%	6.017	0.111
Citric	0.00%	2.78%	3.64%	2.27%	4.095	0.251	1.89%	3.94%	3.83%	0.60%	8.870	0.031
Violets	0.91%	5.57%	5.00%	4.09%	4.512	0.211	**3.77%**	**8.24%**	**4.60%**	**1.81%**	**14.219**	**0.003**

Table S2. contd.

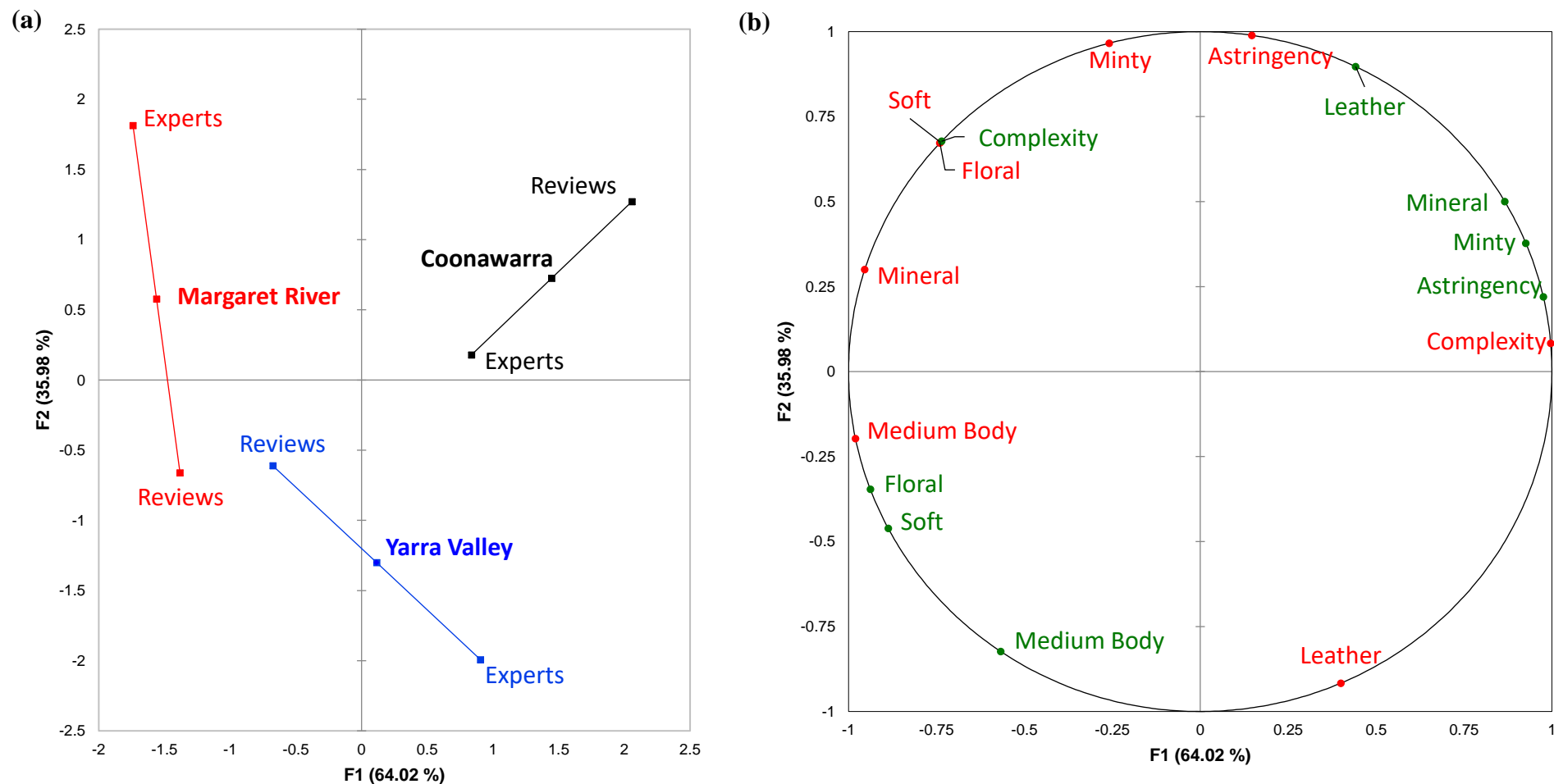| Expert Panel	Regions						Medals					
Categories	Bordeaux	Coonawarra	Margaret River	Yarra Valley	Chi-square	p-value	Gold	Silver	Bronze	No Medal	Chi-square	p-value
Olives	0.00%	3.80%	2.73%	4.09%	4.849	0.183	3.77%	6.09%	3.07%	0.91%	13.042	0.005
Yeasty	6.36%	2.53%	3.18%	3.64%	3.933	0.269	0.00%	6.45%	1.92%	2.72%	11.772	0.008
Apples	3.64%	2.53%	2.73%	3.64%	0.819	0.845	0.00%	2.51%	4.60%	2.72%	4.206	0.240
Varietal	0.00%	3.80%	1.82%	2.27%	5.917	0.116	5.66%	2.51%	2.68%	2.11%	2.286	0.515
Soft	24.55%	19.75%	28.18%	16.36%	10.589	0.014	26.42%	20.79%	20.69%	21.75%	0.956	0.812
High Acidity	19.09%	17.97%	10.45%	19.55%	8.354	0.039	5.66%	13.98%	18.01%	19.03%	7.797	0.050
Fine	12.73%	9.87%	10.91%	6.36%	4.350	0.226	3.77%	15.05%	10.73%	5.74%	17.237	0.001
Hotness	5.45%	6.33%	5.91%	6.82%	0.288	0.962	9.43%	5.38%	7.28%	5.74%	1.891	0.595
Short	7.27%	5.06%	4.55%	4.09%	1.685	0.640	1.89%	2.51%	2.68%	9.67%	22.478	<0.001
Long	0.91%	1.77%	0.91%	0.91%	1.366	0.714	7.55%	1.08%	0.77%	0.91%	17.227	0.001
Complexity	36.36%	22.03%	14.55%	18.18%	22.431	<0.001	49.06%	31.18%	14.18%	14.50%	57.381	<0.001
Medium Body	10.91%	10.63%	17.73%	15.00%	7.257	0.064	18.87%	17.92%	12.64%	9.67%	10.286	0.016
Firm	9.09%	6.58%	4.09%	8.18%	4.201	0.241	5.66%	9.68%	5.75%	5.14%	5.715	0.126
Grainy	13.64%	12.66%	16.82%	12.27%	2.557	0.465	13.21%	14.34%	17.62%	10.57%	6.166	0.104
Astringency	19.09%	12.15%	7.27%	11.36%	10.134	0.017	9.43%	6.09%	8.43%	19.94%	32.675	<0.001
Balanced	1.82%	3.54%	3.64%	2.27%	1.586	0.663	1.89%	3.58%	3.45%	2.72%	0.729	0.866
Grippy	2.73%	3.04%	1.82%	4.09%	2.005	0.571	0.00%	1.79%	3.45%	3.93%	4.285	0.232
Chewy	9.09%	7.09%	7.73%	4.55%	2.985	0.394	7.55%	3.58%	4.60%	11.78%	18.880	<0.001
Bitterness	2.73%	3.54%	5.45%	3.18%	2.289	0.515	15.09%	5.38%	2.68%	1.81%	24.248	<0.001
Full Body	4.55%	7.34%	6.82%	8.18%	1.542	0.673	1.89%	9.32%	10.73%	3.63%	15.203	0.002

Figure S1. Multiple factor analysis plot of Cabernet Sauvignon wines with common significantly different descriptor categories (α = 0.1, chi-square test) based on the regional profiles showing (**a**) projected points of the regions according to online reviews and expert panel, where the length of the line is inversely related to the strength of the agreement, and (**b**) descriptors arising from the online reviews (green) and the expert panel assessments (red).