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Categorical predictors

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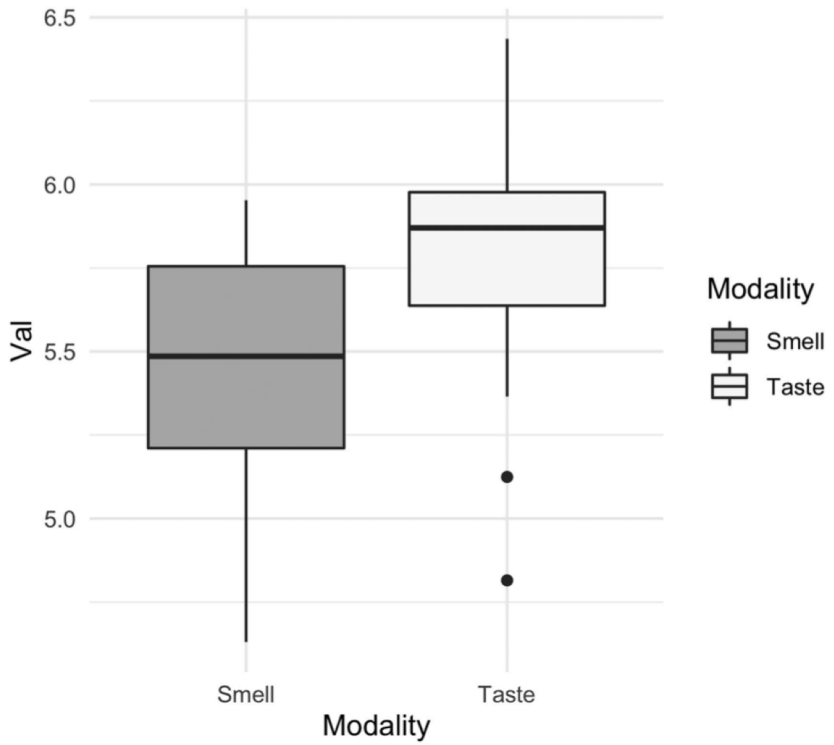
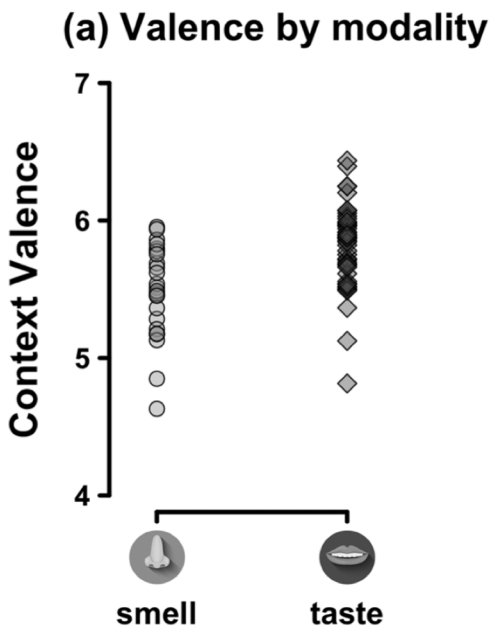
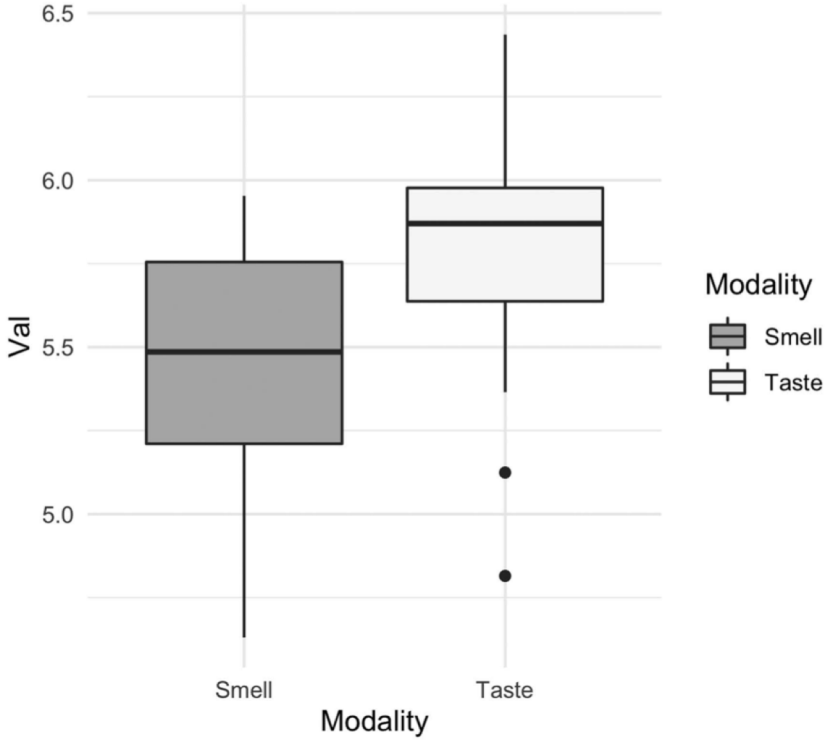
Emotional valence of taste and smell words



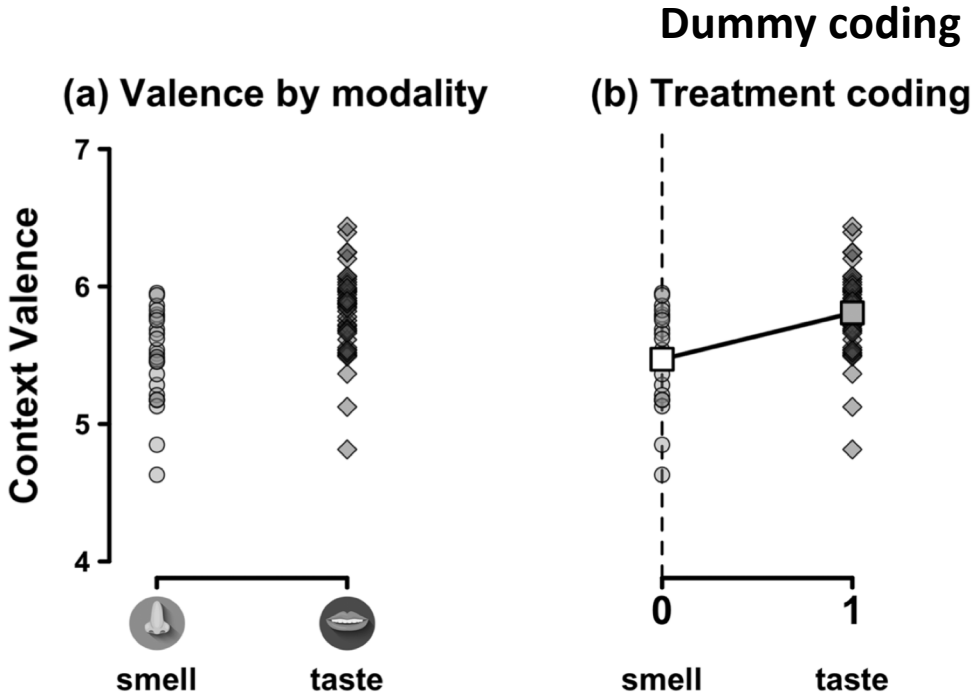
- Winter, B. (2016). Taste and smell words form an affectively loaded part of the English lexicon. *Language, Cognition and Neuroscience, 31*(8), 975-988.
- Adjectives associated with smell (e.g., *rancid*) occurs more commonly with negative nouns (e.g., *sweat*) than adjectives associated with taste (e.g., *sweet - smile*).

Coding categorical predictors





Coding categorical predictors



$$context\ valence = \underset{\text{(smell words)}}{5.5} + \underset{\text{(change from smell to taste)}}{0.3 * modality}$$

smell

Modality = 0 ➔ 5.5 + 0.3 * 0 = 5.5

taste

Modality = 1 ➔ 5.5 + 0.3 * 1 = 5.8

Coding categorical predictors

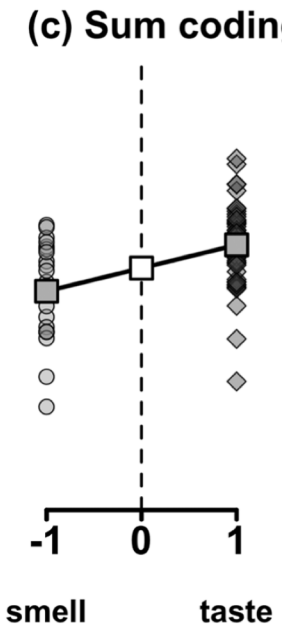
smell

Modality = -1 ➔ 5.6 + 0.17 * -1 = 5.43

taste

Modality = +1 ➔ 5.6 + 0.17 * +1 = 5.77

Deviation coding



Categorical predictors with more than two levels

```
contr.treatment(2)
```

```
  2
1 0
2 1
```

```
contr.treatment(5)
```

```
  2 3 4 5
1 0 0 0 0
2 1 0 0 0
3 0 1 0 0
4 0 0 1 0
5 0 0 0 1
```

	term	estimate
1	(Intercept)	5.58
2	ModalitySmell	-0.11
3	ModalitySound	-0.17
4	ModalityTaste	0.23
5	ModalityTouch	-0.05

Other coding schemes

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```
contr.helmert(4)
```

```
  [,1] [,2] [,3]
1   -1   -1   -1
2    1   -1   -1
3    0    2   -1
4    0    0    3
```

Summary

- Contrasts
  - Two levels:
    - Treatment or dummy coding (default in R)
    - Sum or deviation coding
  - More than two levels:
    - +
    - Helmert coding

- Reference level becomes the intercept (default in R: first in alphabet).
- Report which coding scheme you used in your write up.