

Objective

This research investigates whether review tone affects purchase intent differently for utilitarian vs. hedonic products, and whether this effect changes under high vs. low rating variance.

Hypothesis

- **H1:** For a utilitarian product, a functional review tone will have lower purchase intent and attitude towards the product compared to an emotional review tone. This effect does not exist for a hedonic product.
- **H2:** This relationship is moderated by the variance in ratings, such that this effect is present in the case of low variance in ratings but will not exist for high variance in ratings.

Literature Review

- **Ratings** are numerical summaries of customer opinions, while **written reviews** are the accompanying text where consumers share their experiences and opinions.
- **Ratings:** High variance in online review ratings often signals risk and lowers purchase intent (Zhu & Zhang, 2010; Sun, 2012; Wu et al., 2021). On the other hand, some research shows that if the variance in ratings signals diverse preferences instead of inconsistent quality, it can attract customers (Wang et al., 2015; Lee et al., 2022).
- **Product Type:** Utilitarian products fulfill practical needs and are evaluated based on performance, whereas hedonic products provide enjoyment and experiential value (Holbrook & Hirschman, 1982; Dhar & Wertenbroch, 2000). High variance in review ratings have a strong impact on lowering purchase intent for utilitarian products, but not for hedonic ones (Langan et al., 2017).
- **Written reviews:** Negative reviews of utilitarian products are shown to be more diagnostic than reviews for hedonic products (Sen & Lerman, 2007). Also, emotions in negative reviews reduce the impact of a negative review for utilitarian products (Kim & Gupta, 2012).
- **Emotion in Utilitarian Products:** Consumers evaluate products not only through function but also through emotions, senses, and symbolic meaning (Holbrook & Hirschman, 1982). Adding such hedonic elements to utilitarian products increases perceived value more than adding more utilitarian features (Gill, 2008).
- **Expectancy Violations Theory (EVT):** People form expectations about communication based on social norms and context (Burgoon, 1993). In review settings, EVT helps explain how violations in review content relative to expectations affect how messages are interpreted.
- **Gap:** The current study aims to conceptually replicate the findings of Sen & Lerman (2007) and Kim & Gupta (2012). **Furthermore, no previous study has incorporated product type, review tone and rating variance together.** The previous variance studies focus on numerical ratings and not the written review language. We expect to see a three-way interaction between these three variables.

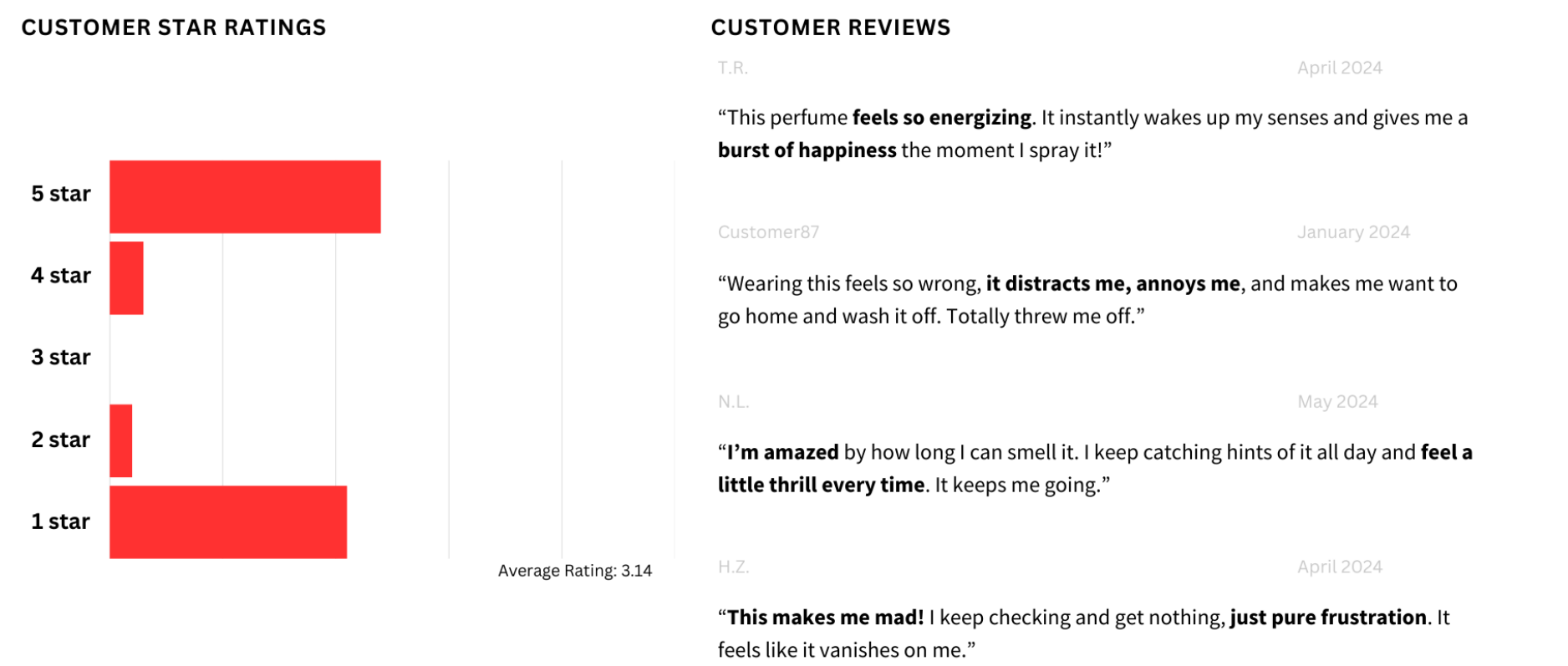
Study Design

2 × 2 × 2 between-subjects experiment

Review pages differ based on:

- **Star rating distribution:** high vs. low variance
- **Product type:** hedonic vs. utilitarian
- **Tone of written reviews:** emotional vs. functional

Stimuli



Low Variance vs. High Variance



Emotional vs. Functional Tone



Procedure

1. Completed Institutional Review Board application (2328129).
2. Pre-registration on AsPredicted.
3. Steps involved for participants:
 1. Self-select themselves for the study.
 2. Read the consent form and agree to participating.
 3. Randomly assigned to one of eight conditions (based on a 2 x 2 x 2 design).

4. View instructions and stimuli.
5. Answer questions regarding:
 1. Purchase intent
 2. Attitude toward product
 3. The influence of star ratings and written reviews on their decision.
6. Demographics
7. Thanked and compensated for their participation.

Results

H1: Product Type x Review Tone (Low Variance Only)

• We fail to reject the null. Review tone and product type did not interact to influence evaluations in low-variance settings ($F = 1.610, p = .205$ for attitude; $F = 1.660, p = .198$ for purchase intent).

H2: Product Type x Review Tone x Variance

• Gender differed significantly across all 8 conditions ($F = 2.396, p = .030$)

• We reject the null for purchase intent but not for attitude. Review tone, product type, and variance interacted to influence purchase intent ($F = 4.288, p = .039$), but marginally for attitude ($F = 3.562, p = .059$; controlling for gender). The results remain similar in direction and significance even with covariates not included.

Estimated Marginal Means

Attitude

Variance	Product Type	Review Tone	Mean	Std. Error
Low	Utilitarian	Functional	4.055	.116
		Emotional	4.022	.117
	Hedonic	Functional	4.150	.116
		Emotional	4.394	.115
High	Utilitarian	Functional	3.901	.116
		Emotional	4.129	.116
	Hedonic	Functional	4.406	.116
		Emotional	4.291	.116

Purchase Intent

Variance	Product Type	Review Tone	Mean	Std. Error
Low	Utilitarian	Functional	3.373	.152
		Emotional	3.132	.153
	Hedonic	Functional	3.434	.152
		Emotional	3.550	.151
High	Utilitarian	Functional	3.073	.153
		Emotional	3.371	.153
	Hedonic	Functional	3.655	.152
		Emotional	3.416	.152

Discussion

• **H1:** Based on previous literature, we expected functional tone to lower purchase intent and attitude for utilitarian products under low variance (Burgoon, 1993; Sen & Lerman, 2007; Gill, 2008; Kim & Gupta, 2012). But in this conceptual replication, we failed to find any interaction.

• **H2:** We found a significant three-way interaction for purchase intent, but tone differences within each group were not significant (all $p > .1$). Follow-up t-tests showed that high variance and functional tone’s cell differs significantly between utilitarian and hedonic products ($t = -3.056, p = .003$ for attitude; $t = -2.707, p = .007$ for purchase intent). Similar results for low variance and emotional tone’s cell ($t = -2.551, p = .011$ for attitude; $t = -2.047, p = .042$ for purchase intent). All other follow-up t-tests were not significant (all $p > .11$).

AsPredicted



References

