

Influencing brand attitude with brand voice: The role of timbre brightness

Hui Yan^a, Haoxiang Sun^b

^a dolphinsurfing@163.com; ^bharrisoneverout@163.com

School of management, Shanghai university, Shanghai 200444, China

Abstract. Brand voice identity serves as a crucial means for consumers to recognize corporate brands, and brightness is an essential dimension of timbre. This study investigates the mechanisms and boundary conditions of the impact of bright and dark timbre types of brand voice identities on consumer brand attitudes through two experiments. The findings reveal that warmth perception and competence perception play a mediating role between the timbre type of brand voice identity and consumer brand attitudes. Compared to dark timbre brand voice identities, bright timbre brand voice identities enhance consumers' warmth perception of the brand, while dark timbre brand voice identities, in contrast to bright timbre identities, enhance consumers' competence perception of the brand.

Keywords: Brand Voice Identity; Warmth Perception; Competence Perception;

1. Introduction

Brand voice identity refers to the specific sounds or music selected by enterprises according to their brand positioning to distinguish different goods or services^[1]. Companies design brand voice identities to increase the brand's recognition and loyalty among consumers. Brand voice identities can be categorized into bright and dark timbre types based on the brightness of the tone. Bright timbre brand voice identities often employ instruments such as the piano, characterized by a higher proportion of high-frequency components^[2], resulting in a strong overall tone penetration and a closer auditory perception. In contrast, dark timbre brand voice identities typically utilize instruments like the bass, with a tone that is more ambiguous and distant in auditory perception^[3]. Examples such as the "thud thud" at the beginning of Netflix's intro, the "ding ding" at Intel's startup, Tencent QQ's "di di di," all have a relatively bright timbre from an auditory perspective; whereas the brand voice identity of Apple's computer startup and Audi's brand voice identity are perceived as relatively dark in tone. Therefore, both bright and dark timbre brand voice identities demonstrate the commercial value of brand voice identities, with research indicating that almost all leading brands are now utilizing brand voice identities^[4].

In the study of brand voice identity, scholars have traditionally focused on the sound characteristics of the voice identity, such as rhythm [5], pitch [4], frequency [6], and the type of instruments used in the voice identity [7]. Due to the complexity of timbre [8], there has been less academic attention to the timbre of brand voice identities. In light of this, exploring the impact of brand voice identities with different timbre brightness on consumer brand attitudes

holds significant innovative importance. This study primarily addresses the following questions: whether there is a difference in the impact of bright and dark timbre brand voice identities on consumer perception.

2. Literature review

2.1 Brand voice identity timbre brightness

Brand voice identity is a highly condensed auditory segment designed for certain commercial institutions, utilizing sound to express their inherent attributes and spiritual connotations^[1]. However, academic research on brand voice identities remains relatively limited, with sound features primarily explored through pitch, rhythm, and timbre^[10]. Among these, pitch characteristics have received more attention in existing research, while studies on the dimension of timbre are less common. Previous studies have mainly focused on the roughness of timbre^[11] and the symbolic meanings of masculinity and femininity in timbre^[9]. Brand voice identity timbre brightness is primarily related to the proportion of high frequencies in the sound^[12] or associated with the centroid of the power spectrum^[13]. This paper discusses how different timbre brightness in brand voice identities affects consumer perception.

2.2 Warmth perception and competence perception

Competence refers to the perception of reliability, intelligence, and confidence in other social members, while warmth refers to the perception of friendliness, kindness, sincerity, and other emotional qualities^[14]. The stereotype content model has also been introduced into the field of consumer behavior to construct a system of cognitive and affective evaluations of businesses by consumers. Existing research has found that consumers tend to perceive non-profit organizations with a higher degree of warmth and profit-oriented organizations with a higher degree of competence^[15]. In the domain of brand voice identity, the application of the stereotype content model to consumer brand perception warrants further theoretical exploration.

3. Hypotheses development

3.1 The impact of brand voice identity timbre brightness on consumer perception

Drawing on the theory of embodied cognition^[16], brand voice identities can evoke distinct psychological sensations in consumers through the physiological experience of the auditory domain. When consumers engage with brand voice identities, the variations in musical rhythm, volume, pitch, familiarity, and likability^[17] lead to cognitive and affective associations with the brand's values and corporate culture, thereby reinforcing the relationship between the consumer and the brand^[18].

A multitude of studies have indicated that brand sounds or musical information can capture consumers' attention and elicit different brand perceptions. For instance, research has shown that the pitch of a brand name's pronunciation (high versus low) affects consumers' brand perceptions, with low pitches generating perceptions of ruggedness and masculinity, while high pitches evoke perceptions of femininity. Additionally, within the vocal characteristics of brand

voice identities, the roughness and familiarity of the timbre can also alter consumers' brand perceptions.

Bright timbre brand voice identities often utilize sounds with soft, round qualities^[3], which can evoke associations with comfort, warmth, and friendliness. In contrast, dark timbre brand voice identities tend to impart a sense of depth and stability, conveying the brand's authority and reliability. As show in figure 1.

Based on the above analysis, this study posits the following hypotheses:

H1: Brand voice identity timbre brightness has varying impacts on consumer perception.

H1a: Bright timbre brand voice identities are more likely to elicit warmth perception in consumers compared to dark timbre brand voice identities.

H1b: Dark timbre brand voice identities are more likely to elicit competence perception in consumers compared to bright timbre brand voice identities.

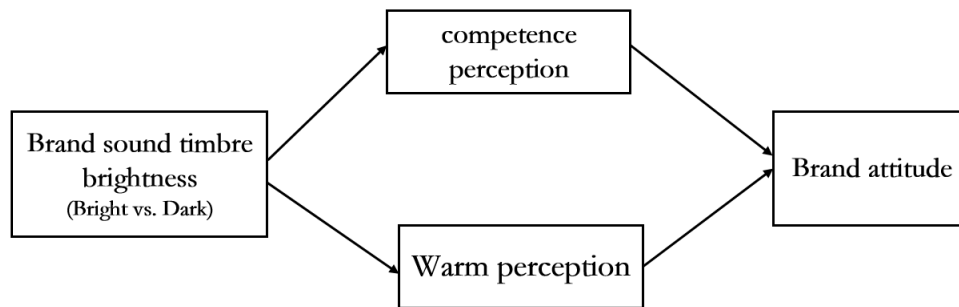


Figure 1 Conceptual model.

4. Experiment

4.1 Pre-experiment

In the pre-experiment, 35 participants were recruited and randomly assigned to two groups to listen to brand voice identities with different timbre brightness. The manipulation of timbre brightness followed the experimental methods and materials of Lee, Harin et al. The bright timbre brand voice identity was represented by the sound of a piano, while the dark timbre was represented by the sound of a bass, with appropriate descriptions provided for the materials. After listening, participants were required to rate the two types of timbre brightness brand voice identities on a 7-point scale.

4.2 Formal experiment

A total of 125 valid questionnaires were collected for the final analysis, with all data analyzed using SPSS 26.0 software.

Experiment 1 aimed to test Hypothesis 1 using a single-factor (brand voice identity timbre brightness: bright vs. dark) between-subjects design. A total of 125 participants were recruited for Experiment 1 ($M_{age}=24.72, SD=7.458; 55.8\%$ female), employing a scenario simulation

method. Participants were randomly assigned to either the bright or dark timbre brand voice identity group and responded to scales assessing warmth perception, competence perception, and a manipulation check of brand voice identity timbre brightness.

4.3 Experimental results

① **Manipulation Check.** In terms of timbre brightness, the bright timbre brand voice identity had a higher timbre brightness than the dark timbre brand voice identity ($M_{\text{bright}}=4.63, SD=1.70; M_{\text{dark}}=1.83, SD=0.63; t=12.83, p<0.001$). The manipulation of brand voice identity timbre brightness was successful.

② **Hypothesis Testing.** An independent samples t-test revealed that consumers in the bright timbre group had a significantly higher warmth perception ($M_{\text{bright}}=6.63, SD=0.63$) than those in the dark timbre group ($M_{\text{dark}}=5.33, SD=1.26; t=2.27, p=0.008$). Conversely, the dark timbre group exhibited a significantly greater competence perception ($M_{\text{dark}}=6.19, SD=0.51$) compared to the bright timbre group ($M_{\text{bright}}=5.13, SD=0.83; t=-4.46, p<0.001$). These findings support Hypothesis 1, indicating that bright timbre brand voice identities are more likely to evoke warmth perceptions (H1a), while dark timbre identities are more likely to evoke competence perceptions (H1b) among consumers. The results are depicted in Figure 2.

③ **Alternative Explanations.** The study further examined whether there were significant differences in the impact of bright and dark timbre brand voice identities on liking, familiarity, and musical proficiency. The results indicated no significant difference in liking between the bright and dark timbre brand voice identity groups ($M_{\text{bright}}=5.47, SD=1.00; M_{\text{dark timbre}}=5.23, SD=1.20; t=1.18, p=0.234>0.05$). Similarly, there was no significant difference in familiarity ($M_{\text{bright}}=5.43, SD=1.07; M_{\text{dark}}=5.32, SD=1.30; t=0.64, p=0.552>0.05$) or musical proficiency ($M_{\text{bright}}=5.27, SD=1.06; M_{\text{dark}}=5.43, SD=1.36; t=0.69, p=0.417>0.05$). Therefore, the alternative explanations of liking, familiarity, and musical proficiency can be ruled out.

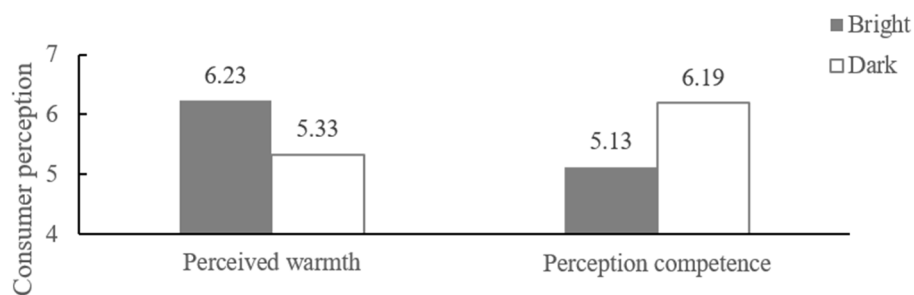


Figure 2 Experiment 1: The impact of timbre brightness on consumer perception.

5. Discussion and conclusion

This study, through experiments, demonstrates that brand voice identities with different timbre brightness elicit varied brand perceptions among consumers. Bright timbre brand voice

identities evoke visual associations of brightness and an auditory sense of clarity, enhancing consumers' perception of brand warmth. In contrast, dark timbre identities conjure visual imagery of darkness and an auditory sense of ambiguity, suggesting a hidden strength, thereby reinforcing consumers' perception of brand capability.

6. Theoretical and managerial implications

The theoretical contribution of this paper is multifaceted, focusing on the exploration and validation of the distinct pathways through which brand voice identities of varying timbre brightness influence consumer perception, thereby enriching the theoretical framework surrounding brand voice identity. While existing literature has predominantly examined the impact of other sound characteristics such as pitch, volume, and rhythm, there has been a relative dearth of attention to the effects of timbre on consumer brand attitudes. This study delves into the differential impacts of bright versus dark timbre brand voice identities on consumer perceptions, specifically warmth perception versus competence perception, thereby extending the scope of research in brand voice identity.

Furthermore, from a managerial perspective, the timbre and brightness of different brand voice identifiers can elicit varying perceptions among consumers. This insight underscores the necessity for brand voice identifiers to be ingeniously designed in accordance with the messages the brand intends to convey, thereby generating the specific cognition that the brand anticipates for its consumers. Enterprises should pay attention to differentiating between various brand voice identifiers and proactively employ those with distinct timbre brightness to position their brand. This strategy is instrumental in effectively communicating accurate brand information to consumers.

7. Limitations and future research

This study has certain limitations. Firstly, the research exclusively employed scenario experiments to obtain primary data. Future studies could collect secondary data, such as brand voice identity information present in commercial environments, and process it professionally to extract sound feature information, thereby enhancing the external validity and practical guidance of the research. Secondly, future research could explore the moderating effects of consumer individual characteristic variables, such as cognitive needs. Lastly, future studies could integrate multisensory elements, investigating whether the color of brand visual identities (dark or bright) also influences consumer perception.

References

- [1] Gustafsson C. Sonic branding: A consumer-oriented literature review[J]. *Journal of Brand Management*, 2015, 22(1): 20-37.
- [2] Saitis C, Siedenburg K. Brightness perception for musical instrument sounds: Relation to timbre dissimilarity and source-cause categories[J]. *The Journal of the Acoustical Society of America*, 2020, 148(4): 2256-2266.

- [3] Springer DG, Schlegel AL, Lewis AJ. Effects of Dark and Bright Timbral Instructions on the Production of Pitch and Timbre[J]. *Journal of Research in Music Education*, 2021, 68(4): 482-498.
- [4] Zoghaib A, Luffarelli J, Feiereisen S. Branding with music: How can music contour and tonality enhance perceived brand innovativeness and brand evaluations?[J]. *Psychology & Marketing*, 2023, 40(10): 1965-1985.
- [5] Stewart K, Koh HE. Hooked on a feeling: The effect of music tempo on attitudes and the mediating role of consumers' affective responses[J]. *Journal of Consumer Behaviour*, 2017, 16(6): 550-564.
- [6] Sunaga T. How the sound frequency of background music influences consumers' perceptions and decision making[J]. *Psychology & Marketing*, 2018, 35(4): 253-267.
- [7] Puligadda S, VanBergen N. The influence of sound logo instruments on brand personality perceptions: An investigation of brand ruggedness and sophistication[J]. *Journal of Business Research*, 2023, 156: 113531.
- [8] Melzner J, Raghubir P. The Sound of Music: The Effect of Timbral Sound Quality in Audio Logos on Brand Personality Perception[J]. *Journal of Marketing Research*, 2023, 60(5): 932-949.
- [9] Techawachirakul M, Pathak A, Motoki K, et al. Influencing brand personality with sonic logos: The role of musical timbre[J]. *Journal of Business Research*, 2023, 168: 114169.
- [10] Ii GCB. Music, Mood, and Marketing[J]. *Journal of Marketing*, 1990, 54(4): 94.
- [11] Melzner J, Raghubir P. The Sound of Music: The Effect of Timbral Sound Quality in Audio Logos on Brand Personality Perception[J]. *Journal of Marketing Research*, 2023, 60(5): 932-949.
- [12] Li S, Timmers R, Wang W. The Communication of Timbral Intentions Between Pianists and Listeners and Its Dependence on Auditory-Visual Conditions[J]. *Frontiers in Psychology*, 2021, 12: 717842.
- [13] Saitis C, Siedenburg K. Brightness perception for musical instrument sounds: Relation to timbre dissimilarity and source-cause categories[J]. *The Journal of the Acoustical Society of America*, 2020, 148(4): 2256-2266.
- [14] Fiske ST, Cuddy AJC, Glick P, et al. A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition.[J]. *Journal of Personality and Social Psychology*, 2002, 82(6): 878-902.
- [15] Aaker J, Vohs KD, Mogilner C. Nonprofits Are Seen as Warm and For-Profits as Competent: Firm Stereotypes Matter[J]. *Journal of Consumer Research*, 2010, 37(2): 224-237.
- [16] Zhong Ke, Wang Haizhong, Yang Chen. The Application of Sensory Marketing Strategy in Service Failure: An Empirical Study on Tactile Experience to Relieve Customer Complaints [J]. *China Industrial Economy*, 2014, (01): 114-126
- [17] Ballouli K, Heere B. Sonic branding in sport: A model for communicating brand identity through musical fit[J]. *Sport Management Review*, 2015, 18(3): 321-330.
- [18] Das S, Sandhu K, Mondal SR. Music logos drive digital brands: an empirical analysis of consumers' perspective[J]. *Journal of Strategic Marketing*, 2022: 1-16.