

1 *Research Article*

2 **Shades of Grey: Quantifying a Database of 18**  
3 **Aesthetic Moods in Classical Chinese Poetry**

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12

13 **Abstract**

14 Understanding aesthetic moods in classical Chinese poetry is essential for decoding  
15 Chinese aesthetics and can significantly benefit culturally and aesthetically inspired  
16 creative fields. However, research on how these aesthetic moods are perceived and  
17 deconstructed is limited. To address this gap, this study quantitatively identified 18  
18 distinctive aesthetic mood clusters in classical Chinese poetry by empirical methods  
19 including natural language processing (NLP). These clusters were paired with relevant  
20 tools: mood-eliciting images, the circular valence-arousal model, and diary episodes  
21 associated with specific poems. The outcomes were developed into a website that  
22 serves as a practical database, visualising the granularity of aesthetic moods expressed  
23 in classical Chinese poetry and relevant elements for mood-focused research and  
24 practice.

25 **Keywords**

26 mood-focused arts, poetic moods, mood typology, natural language processing (NLP),  
27 poetry database

## 28 **Introduction**

29 While literary and artistic forms broadly convey moods, poetry offers a concentrated  
30 and cohesive means of making sense of the phenomenal world through literal elements,  
31 resulting in an affective experience of aesthetic savouring (Gafni & Tsur, 2021;  
32 Sundararajan, 2004). For instance, in Edgar Allan Poe’s *The Raven* (1845), the opening  
33 lines, “Once upon a midnight dreary, while I pondered, weak and weary” – with the  
34 words *midnight dreary*, *weak* and *weary* – evoke a mood of gloom, transforming an  
35 ordinary moment into vivid and lingering imagery in the reader’s mind that invites  
36 aesthetic savouring (Hasan et al., 2024). Poetry holds a distinctive power to evoke what  
37 are known as *aesthetic moods* – diffuse, pervasive and cognitive feeling-states that  
38 differ from the short-lived, behavioural, and affective states of emotion (Beedie et al.,  
39 2005; Xue et al., 2020). As scholars suggest, “mood is the result of emotion”, and  
40 people “think a mood, feel an emotion” (Beedie et al., 2005, p. 857). When engaging  
41 with poetry, the aesthetic mood arises from a blend of cognitive imagery and emotional  
42 resonance, and this interplay is crucial to scrutinising the aesthetic experiences which  
43 poetry elicits (Fink & Drake, 2016; Sundararajan, 2004).

44 By elevating the mundane to the realm of the aesthetically profound, aesthetic  
45 moods in poetry have the potential to stimulate creativity in design and other creative  
46 works (Chow et al., 2018; Hitsuwari & Nomura, 2021; McCulliss, 2013; Orth et al.,  
47 2018; Sundararajan, 2004). When aesthetic moods inspire designers, they reinterpret  
48 these moods across various mediums (Xue et al., 2020). For example, a tranquil mood  
49 in the designer’s mind might be conveyed through clean, minimalist, and soft curves  
50 in product design, which, in turn, can shape users’ affective experiences. This impact  
51 draws from the theoretical tenet that design forms can be strategically crafted to elicit  
52 affective responses and enhance user experiences (Desmet & Hekkert, 2007; Norman,  
53 2007; Ho & Siu, 2012).

54 Classical Chinese poetry can evoke aesthetic moods, a stark departure from the  
55 Western tradition because of its cognitive-affective response with a reflective process

56 (Sundararajan, 2010). This process highlights the interplay between cognitive  
 57 reflection and emotional engagement, immersing the reader in a mind-state of meaning,  
 58 emotion, and imagery (Sundararajan, 2004; Zhu, 2007). The affective impact of  
 59 classical Chinese poetry is evident in empirical investigations. Empirical evidence  
 60 shows a significant difference between affective states before and after  
 61 reading classical Chinese poems in cross-cultural contexts ( $p < 0.001$ ); the anxiety level  
 62 of the German participants declined significantly after they read a classical Chinese  
 63 poem (Zhang, 2022). The highly regulated form of classical Chinese poetry requires  
 64 readers to mentally fill in missing characters, such as prepositions, to complete the  
 65 meaning (Zhu, 2007).

66 Liu Zongyuan (773–819), a prominent poet of the Tang dynasty, is known for his  
 67 influential contributions to classical Chinese poetry. He emphasised vivid imagery and  
 68 often explored themes of nature, solitude, and the human condition. His poem *River*  
 69 *Snow*, a prime classical Chinese landscape poem, exemplifies an aesthetic mood in the  
 70 two lines “lone boat palm-bark-cape bamboo-hat old-man” (*gū zhōu suō lì wēng*, 孤  
 71 舟蓑笠翁) and “alone fish cold river snow” (*dú diào hán jiāng xuě*, 独钓寒江雪).  
 72 Without prepositions, the poem invites the reader to complete the scene mentally: an  
 73 old man, poorly dressed, fishing alone on a snow-covered river, evoking a mood of  
 74 solitude. While the poem does not explicitly convey the old man’s inner feelings  
 75 literally, it encourages reflection on the imagery presented. This cognitive-affective  
 76 response with a reflective process fosters aesthetic moods in classical Chinese poetry  
 77 “outside the Western world” (Sundararajan, 2010, p. 22).

78 A famous Chinese Song dynasty painting inspired by the poem *River Snow*  
 79 exemplifies how aesthetic mood is reinterpreted in visual art (Figure 1). The phrase  
 80 “lone boat” (*gū zhōu*, 孤舟) was creatively reinterpreted into a simple image of a man  
 81 with a hidden face on his boat, set against a vast and tranquil expanse of empty space.  
 82 In contrast, in *The Raven*, Edgar Allan Poe describes physical discomfort and

83 emotional states through words like *weak* and *weary*, evoking a gloomy and solitary  
84 mood. The hidden face in the painting invites viewers to reflect on, and find meaning  
85 in, the solitude. The poem's tranquil, soundless imagery and the painting's luminous  
86 and empty space encourage a more positive interpretation of solitude, emphasising  
87 resilience in challenging conditions – contrasting with the often negative connotations  
88 of loneliness.

89



90 **Figure 1.** Cold River Fishing Alone, Ma Yuan, Song Dynasty, the Collection of the Tokyo National  
91 Museum.

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93 The reflective approach to experiencing aesthetic moods in classical Chinese poetry  
94 is deeply rooted in its cultural distinctiveness, and understanding these moods is  
95 essential for interpreting Chinese aesthetics (Yang & Yang, 1963). The aesthetic mood  
96 of solitude in *River Snow* captures this optimistic solitude – mentally removing oneself  
97 from the crowd and as the ideal condition for mental cultivation, then transcending

98 worldly troubles – which touches the essence of Chinese aesthetics (Sundararajan,  
99 2004). This solitude conveys a strong sense of personal resilience while  
100 suggesting detachment from worldly concerns. In Chinese thought, being alone or  
101 experiencing material scarcity is not inherently negative; instead, it offers an  
102 opportunity to discover inner freedom. This perspective aligns with Taoist beliefs,  
103 emphasising harmony with the natural order and a form of stoic optimism (Wu, 2006).  
104 The mood of solitude expressed in *River Snow* is rich in meaning, inviting readers to  
105 interpret it deeply, which is why solitude is a recurring theme in various forms of  
106 Chinese art.

107 Scholars emphasise that categorising mood phenomena is crucial in mood-focused  
108 creative practice, providing diverse and rich sources of inspiration (Fink & Drake, 2016;  
109 Xue et al., 2020). Moods evoke affective responses that resonate with both designers  
110 and their audiences. Moreover, the affective impact of classical Chinese poetry attracts  
111 cross-disciplinary academic attention (Hou & Frank, 2015; Sundararajan, 2004). For  
112 instance, Wang et al. (2021)’s work demonstrates that multimedia supports the  
113 cognitive-affective response in Chinese poetry. However, the classification of aesthetic  
114 moods in classical Chinese poetry has historically been implicit and subtle, as these  
115 moods are not discrete but “shades of grey” (Sundararajan, 2004, p. 202). This  
116 ambiguity poses challenges for contemporary creative practitioners and researchers  
117 who want to reinterpret these moods.

118 With the emergence of natural language processing (NLP) by deep-learning  
119 approaches, scholars have recently applied computational methods to understand  
120 affective phenomena in classical Chinese poetry, for NLP’s advantage in reducing  
121 subjective bias. For instance, Hou and Frank (2015) use a deep learning-based  
122 approach to classify emotions by extracting the characters of classical Chinese poetry;  
123 their categories centres on topics like travelling and war. Their work focuses on  
124 semantic expressions in texts while overlooking the affective nuances and imagery  
125 associated with different emotions. Similarly, Zhang et al. (2023)’s work applies NLP  
126 to classify characters in classical Chinese poetry, with resulting emotional categories

127 including pleasure, fear, and anger. Their work adheres to traditional psychological  
128 categories of emotion, often neglecting the cultural distinctiveness and the cognitive-  
129 affective response in readers when interpreting these categories. As mentioned earlier,  
130 aesthetic moods in classical Chinese poetry involve a cognitive-affective response with  
131 a reflective process that is rich in meaning, emotions, and imagery.

132 Furthermore, existing studies on mood typology in classical Chinese poetry that  
133 utilise deep-learning methods and other empirical approaches have not adequately  
134 explored classical literature on aesthetic moods, notably Sikong Tu's (837–908)  
135 *Twenty-Four Poetic Moods* (*èr shí sì shī pǐn*, 二十四诗品). Tu's mood typology is  
136 crucial in understanding affective responses in classical Chinese poetry (Sundararajan,  
137 2004). This gap is significant, as it restricts our theoretical grasp of the granularity of  
138 aesthetic moods in classical Chinese poetry.

139 This study aims to develop an empirically observable and measurable taxonomy of  
140 nuanced aesthetic moods in classical Chinese poetry. By employing advanced  
141 techniques such as NLP, and by referencing classical literature like the *Twenty-Four*  
142 *Poetic Moods*, this study seeks to deepen understanding of mood granularity within  
143 this poetic tradition. Additionally, this study will provide verbal and pictorial  
144 descriptions based on participant responses, offering insights into cognitive-affective  
145 responses in aesthetic moods. Previous scholars have highlighted that textual and  
146 pictorial materials can significantly enhance culturally inspired creations (Luo & Dong,  
147 2017). Our findings were compiled into an online database, enriching understanding of  
148 the emotional and semantic nuances of aesthetic moods in classical Chinese poetry and  
149 supporting researchers' and designers' aesthetic pursuits.

150 We begin, in the following sections, by highlighting the aesthetic mood phenomena  
151 in classical Chinese poetry, and then discuss how these moods differ from Western  
152 psychological categories of emotions, as well as classical Chinese poetry's unique role  
153 in mood-focused studies. Next, we review previous work on the mood typology of  
154 classical Chinese poetry and present a study using comprehensive empirical methods

155 to develop a database of aesthetic moods from classical Chinese poetry. Finally, the  
 156 limitations of our study and future research directions are discussed.

### 157 **Aesthetic Moods in Classical Chinese Poetry**

158 Previous studies often interchange the terms *mood* and *emotion*, further complicating  
 159 the understanding of these concepts. Desmet et al. (2016) clarify that emotions differ  
 160 from moods: emotions are relatively short-lived, lasting from seconds to a few hours,  
 161 while moods can persist for much longer periods. Emotions are specific and targeted,  
 162 typically triggered by distinct stimuli, whereas moods are diffuse and lack a clear  
 163 focus. Additionally, mood and emotion differ in their cognitive states; a mood fosters  
 164 a cognitive state, whereas emotions are more behavioural responses – captured by the  
 165 phrase “think a mood, feel an emotion” (Beedie et al., 2005, p. 857). Although mood  
 166 and emotion are distinct, they are interrelated. Scholars explain that “mood is the result  
 167 of emotion” (Beedie et al., 2005, p. 857). Moods are cognitive states that shape our  
 168 emotional experiences.

169 Previous research on classical Chinese poetry has emphasised the emotional  
 170 response (Frijda & Sundararajan, 2007; Yuan & Guoyuan, 2022). However,  
 171 Sundararajan (2004) argues that moods are more suitable for categorising affective  
 172 phenomena in classical Chinese poetry. Moods, unlike emotions, are not easily  
 173 triggered; they involve a reflective process characterised by aesthetic savouring. This  
 174 perspective underscores the significance of understanding moods, as they encompass  
 175 cognitive-affective responses beyond the emotional response (Sundararajan, 2010).

176 In Chinese poetics, the concept of *Xing* (兴) refers to evocative imagery that  
 177 indirectly expresses aesthetic moods by creating a lingering realm, *Jing* (境), in the  
 178 reader’s mind (Sundararajan, 2015, p.103). This technique does not label moods  
 179 directly but invites readers to make sense of and reflect on vivid descriptions of external,  
 180 observable scenes that resonate emotionally, namely imagery (e.g., a scene or  
 181 landscape). This imagery is often likened to a painting. The painting-like imagery is a

182 basic tenet of the aesthetics of classical Chinese poetry: “There is poetry in painting  
 183 and painting in poetry” (Zhu, 2007). In other words, *Jing* is associated with an aesthetic  
 184 mood rich in meaning, emotion, and imagery. According to Frijda and Sundararajan  
 185 (2007), the aesthetic moods entangled with classical Chinese poetry are “refined  
 186 emotions with aesthetic savouring”. When engaging in an aesthetic mood, one enjoys  
 187 savouring their emotional response to the stimulus, much like savouring the taste of  
 188 food. This process exhibits a high degree of self-reflexivity (*zì xǐng*, 自省) and  
 189 detachment (*chāo tuō*, 超脱) from emotions, where “the intentional object of emotion  
 190 is the experience rather than the experienced object” (Frijda & Sundararajan, 2007, p.  
 191 229).

192 The aesthetic moods expressed in classical Chinese poetry differ significantly from  
 193 traditional Western psychological categories of emotions, such as happiness or sadness.  
 194 Western psychologists define emotions as distinct bodily responses arising from event-  
 195 emotion relationships (Xue et al., 2020), best illustrated by an emotion-arousing event  
 196 like winning the lottery, which elicits an overt bodily response (Frijda, 1986, 2009;  
 197 Richins, 2002). In contrast, the aesthetic moods in classical Chinese poetry are imbued  
 198 with deeper layers of aesthetic savouring, stemming from an affective response that  
 199 encourages reflective engagement. For example, the aesthetic mood of solitude in *River*  
 200 *Snow* invites readers to reflect on the experience of being alone, extending beyond mere  
 201 behavioural responses of emotion. Sundararajan (2015) describes how Chinese people  
 202 might perceive pain as akin to a book – something to be studied, reflected upon and  
 203 learned from. This perspective suggests that while individuals from many cultures may  
 204 engage in reflective processes that transform moods into nuanced aesthetic experiences,  
 205 Chinese people are culturally encouraged to experience and learn from emotions.

206 Increasing numbers of empirical studies have investigated the affective  
 207 phenomenon of aesthetic savouring in classical Chinese poetry. For example,  
 208 functional magnetic resonance imaging (fMRI) studies have suggested that different  
 209 areas scattered in both the left and right cerebral hemispheres are activated when an

210 individual experiences moods in classical Chinese poetry (Gao & Guo, 2018), which  
 211 implies that this aesthetic mood phenomenon involves a cognitive-affective response.

212 Interpreting aesthetic moods in classical Chinese poetry has historically been crucial  
 213 for understanding Chinese aesthetics and enhancing human creativity (Peng & Jung,  
 214 2021; Wang et al., 2021). Despite this significance, there is a lack of empirical studies  
 215 that offer a comprehensive view of the aesthetic moods expressed within this poetic  
 216 tradition. Therefore, we propose the following research question:

217 **RQ1:** How to create a nuanced palette of aesthetic moods that provides a  
 218 comprehensive overview of the emotional landscape in classical Chinese poetry?

### 219 **Classification of Aesthetic Moods in Classical Chinese Poetry**

220 *Classical Chinese poetry* refers to the peak of Chinese poetic tradition, from sometime  
 221 before 1500 BCE to 1200 CE (Fuller, 2020; Hinton, 2008). A well-recognised typology  
 222 of moods in classical Chinese poetry is Sikong Tu's *Twenty-Four Poetic Moods*. Tu  
 223 did not explicitly use the term *aesthetic mood* to describe his categories, he used phrase  
 224 诗品(*shī pǐn*) in the Chinese title. The first character, *shī*, literally means poetry, while  
 225 the second, *pǐn*, can mean category as a noun or savour as a verb. Scholars recognize  
 226 that Tu classifies readers' affective responses to poetry (Knechtges, 1980;  
 227 Sundararajan, 2004). Historically, numerous interpretations of Sikong Tu's mood  
 228 classification exist (Varsano, 2016; Yang & Yang, 1963); the first reason for these  
 229 interpretations is that *Twenty-Four Poetic Moods* uses ancient Chinese with brief,  
 230 verbal descriptions that are difficult to comprehend. Second, the reason might lie in  
 231 the ambiguous granularity of each mood. Some of Tu's categories are not discrete; they  
 232 differ subtly. For example, the moods of 超诣 (*chāo yì*) and 飘逸 (*piāo yì*) in his  
 233 work both express a feeling of detachment; however, the latter emphasises a sense of  
 234 independence and aloofness, while the former highlights a sense of spiritual  
 235 sublimation. Scholars have noted that various translations and interpretations of Sikong  
 236 Tu's mood typology exist in the literature (Owen, 1992; Zhang, 2005). For instance,

237 the mood of 纤秣 (*xiān nóng*) has been translated variously in previous literature as  
238 “slim-stout”, “ornate”, “delicacy” and “splendour” (Yan, 2016).

239 To address the complexity of affective phenomena in classical Chinese poetry,  
240 emerging NLP by deep learning has been employed for the emotional analysis of  
241 classical Chinese poems. A deep-learning algorithm using neural networks with many  
242 layers provides a method for extracting and clustering words based on semantic vectors,  
243 thereby mitigating subjective bias (Otter et al., 2021). For instance, Hou and Frank  
244 (2015) analyse Chinese poems from the Tang dynasty by categorising lexical items  
245 into positive and negative groups and comparing the emotions expressed by different  
246 poets. Similarly, Zhang et al. (2023) utilise deep learning to detect cultural connotations  
247 in poetic texts by examining emotional granularity. Zhao et al. (2014) further classified  
248 Tang dynasty poetry into positive, neutral, and negative emotions, finding a higher  
249 prevalence of negative emotions in collected poems. However, these studies largely  
250 adhere to traditional emotional frameworks established by Western psychologists.  
251 Moreover, their works on classifying affective phenomenon neglect cognitive imagery  
252 associated with poems and previous literature regarding the well-recognised typology  
253 of moods from *Twenty-Four Poetic Moods* by Sikong Tu.

254 Recent developments in NLP algorithms, particularly Bidirectional Encoder  
255 Representations from Transformers (BERT), have significantly advanced the research  
256 field of emotional analysis. BERT, a pre-trained transformer NLP network (Devlin et  
257 al., 2018), has demonstrated superior performance across various downstream tasks,  
258 including question-answering, named entity recognition (NER) and sentence pair  
259 classification (Reimers & Gurevych, 2019). Its ability to capture semantic relationships  
260 in a text has the potential to accurately cluster mood words. Traditional corpus coding  
261 and interpretation methods are often prone to unconscious subjectivity and biases (Frey  
262 & Fontana, 1991). In contrast, BERT’s architecture encodes bidirectional context,  
263 enhancing the accuracy and objectivity of the clustering process. By drawing on  
264 comprehensive literature on aesthetic moods in classical Chinese poetry, such as

265 Sikong Tu's *Twenty-Four Poetic Moods*, this methodological choice aims to provide a  
266 classification of mood words that is grounded in more robust, data-driven insights  
267 rather than subjective interpretations (Timoshenko & Hauser, 2019).

268 Moreover, recent developments in the visualisation of emotion granularity have the  
269 potential to help us understand aesthetic moods in classical Chinese poetry. As stated  
270 earlier, mood states consist of emotional components. As a prevalent model in emotion  
271 studies, the valence-arousal model initially proposed by Russell (1980) has helped  
272 determine emotions' granularity visually. The valence-arousal model is a two-  
273 dimensional space used to represent emotions based on two dimensions: valence and  
274 arousal. Thus, any target aesthetic mood consists of different blends of pleasure and  
275 arousal under the valence-arousal space. Scholars (Li, 2018; Yu et al., 2016) have  
276 studied Chinese emotion as a circular structure based on the valence-arousal space.  
277 This implies that the structure of mood experience can be characterised as an ordering  
278 of emotional states on the circumference of a circle. The dissimilarity between two  
279 moods is verified as a function of their distance from one another on the perimeter of  
280 the circle, with the dissimilarity between any two states increasing as the distance  
281 between them on the circle increases (Remington et al., 2000). Yik (2009) notes that a  
282 target emotion could be mapped onto a specific location in the circular ordering along  
283 the perimeter. The circular ordering of target emotions is determined by estimating the  
284 angular position for each emotion using its blending of pleasure and arousal under the  
285 valence-arousal space. Such a circular space offers a valuable tool for visually  
286 comprehending the aesthetic moods of classical Chinese poetry and their dynamic  
287 relationships.

288 Therefore, we propose the following research question:

289 **RQ2:** How can empirical approaches be used to classify distinct aesthetic moods in  
290 classical Chinese poetry and visually represent the granularity of moods?

291 Previous studies on mood typology in classical Chinese poetry offer limited insights  
292 into the imagery and semantic elements involved, leaving the interplay between these  
293 elements and cognitive-affective responses largely unexplored. This complexity poses

294 challenges for contemporary artists outside the poetry field, making it difficult for them  
295 to interpret the aesthetic moods present in classical Chinese poetry. Additionally,  
296 individual responses to these aesthetic moods, across various media such as images and  
297 verbal texts, have not been empirically examined in the existing literature.

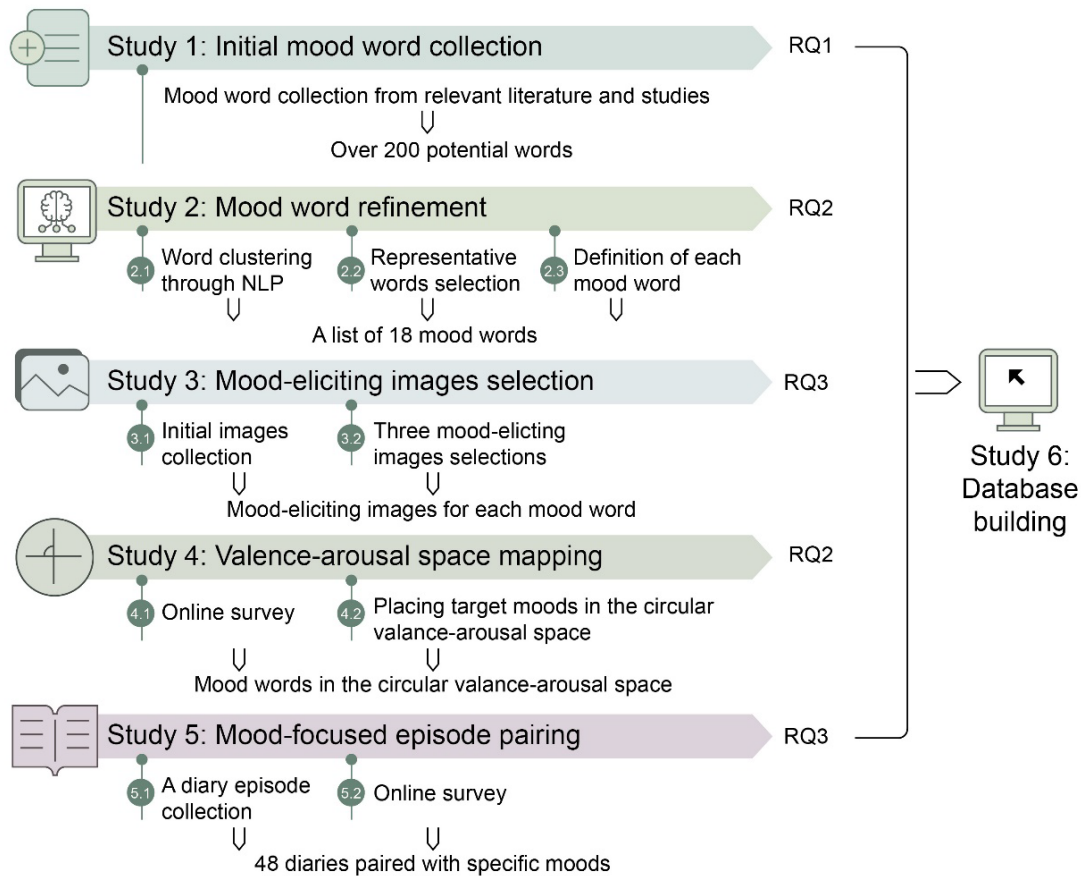
298 To address this gap, this study integrates findings from previous research on Sikong  
299 Tu's mood typology with relevant literature on Chinese poetry (as detailed in the  
300 "Study 1" section) and provides empirical evidence to identify measurable items with  
301 various visual and textual descriptions. By employing taxonomy as a secondary  
302 classification approach (Smith, 2002), this study aims to make the aesthetic moods  
303 inherent in classical Chinese poetry more accessible for contemporary practice.  
304 Therefore, we propose the following research question:

305 **RQ3:** How do empirical approaches combine identified aesthetic moods in classical  
306 Chinese poetry with verbal and pictorial materials?

## 307 **Research Methods**

### 308 **Overview**

309 There is empirical evidence (Wang et al., 2021) indicating that learning classical  
310 Chinese poetry may benefit from using images and texts. This study provides  
311 empirically verified mood clusters, relevant mood-eliciting images, the valence-arousal  
312 model, and mood-focused diary episodes to facilitate a comprehensive understanding  
313 of the aesthetic moods in classical Chinese poetry. Figure 2 shows the whole six-stage  
314 process.



315 Figure 2. An Overview of the Database-Building Procedure.

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We adopted a mixed empirical strategy based on psychology (Xue et al., 2020). Desmet et al. (2020) classifies 20 moods that people encounter in everyday life through word collection, word classification and word refinement. To address RQ1, Study 1 collects a comprehensive set of aesthetic mood words from various literature sources (details are provided in Study 1). For RQ2, Study 2 introduces a state-of-the-art NLP by deep learning to conduct mood word clustering during the refinement phase, aiming to mitigate biases inherent in traditional approaches. The chosen method is designed to minimise implicit biases by employing robust training strategies and utilising a diverse dataset. Additionally, in Study 4, a circular-space model, based on the two-dimensional

326 arousal-valence model (Russell, 1980), is evaluated for the first time to visualise the  
327 emotional granularity of each aesthetic mood in classical Chinese poetry.

328 To answer RQ3, Study 3 focuses on selecting mood-eliciting images. Drawing on  
329 the approach suggested by Xue et al. (2020), participants are asked to maintain a two-  
330 week mood diary, during which diary episodes are quantitatively paired with each  
331 mood as verbal material in Study 5.

### 332 **Ethical Considerations**

333 Ethical approval for this study was obtained from the Hong Kong Polytechnic  
334 University (Approval Number: HSEARS20201126003). All participants provided  
335 informed consent before participating and were informed that their responses would  
336 be kept anonymous and confidential. Participants were also made aware of their right  
337 to withdraw from the study at any time without penalty.

### 338 **Study 1: Initial Mood Word Collection**

#### 339 *Procedure*

340 A comprehensive list of mood words associated with classical Chinese poetry was  
341 compiled. There were three types of sources used in this process. The first source of  
342 mood words consisted of descriptions provided by participants in an open survey  
343 conducted by the first author as part of her PhD thesis, which explored readers'  
344 responses to classical Chinese poetry (Qin, 2022). The second source comprised  
345 different English translations of Sikong Tu's *Twenty-Four Poetic Moods* published in  
346 peer-reviewed journals or books (the researchers' translations were also included). The  
347 third source was a collection of peer-reviewed publications discussing aesthetic  
348 emotions or moods expressed in classical Chinese poetry. These publications included  
349 linguistic typologies of emotions, computational sentiment analysis and emotional  
350 analysis of classical Chinese poetry.

#### 351 *Results*

352 Study 1 extracted over 200 mood words (see Appendix 1).

## 353 **Study 2: Mood Word Refinement**

### 354 *Procedure*

355 During the second stage, the mood word set was classified through a rigorous three-  
356 step process integrating objective and subjective criteria to mitigate the biases inherent  
357 in traditional methods.

358 In Study 2.1, BERT embeddings, dimension-reduction techniques and K-means  
359 clustering were applied, as illustrated in Figure 3. The process unfolded in four key  
360 steps. First, the BERT model (Devlin et al., 2018) was used to generate high-  
361 dimensional word embeddings for each mood word, capturing the semantic meaning  
362 of each word in a multidimensional vector space. The mood word set is analogous to  
363 the transcript of words from interviews or a focus group; the clustering of BERT  
364 embedding is similar to extracting and summarising different emotional responses; and  
365 the approach to retrieving a hierarchical architecture of mood response was, to some  
366 extent, equal to mood tags (or codes) generation from interviews.

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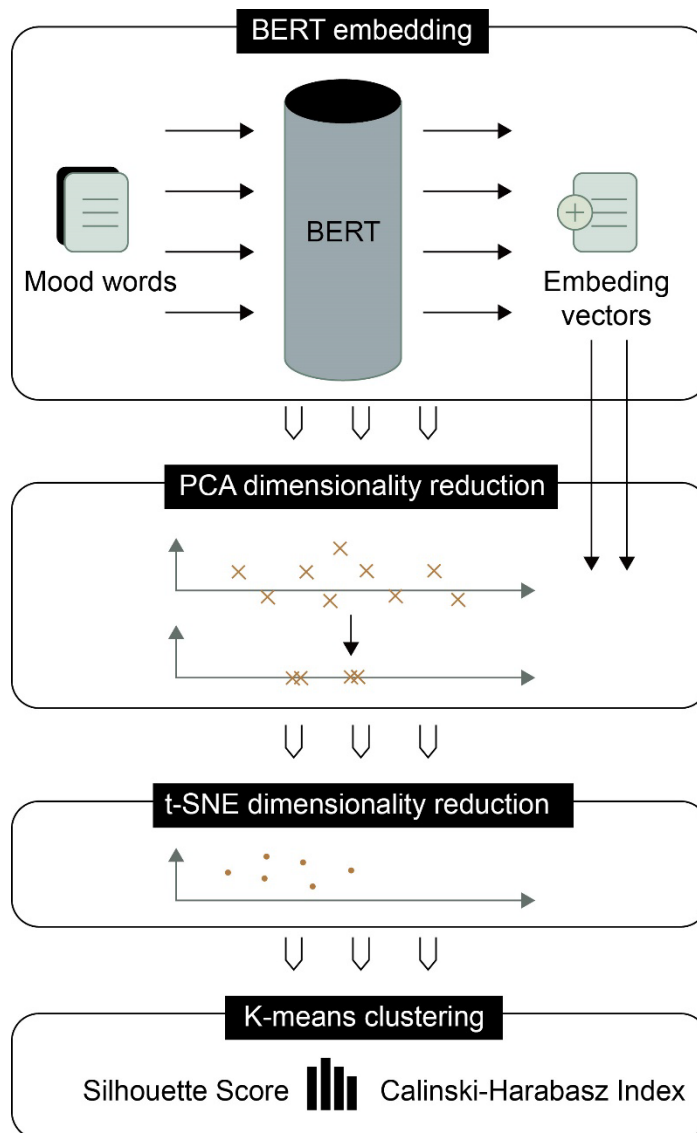
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379 **Figure 3.** The Process of the NLP Method Used in this Study.

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381 Second, Principal Component Analysis (PCA) was applied to reduce the  
 382 dimensionality of these embeddings to 200 dimensions. This step helped preserve most  
 383 of the variance in the data while improving the efficiency and performance of  
 384 subsequent clustering (Abdi & Williams, 2010; Omuya et al., 2023).

385 Third, the t-distributed Stochastic Neighbour Embedding (t-SNE) technique was  
 386 employed to further reduce the dimensionality of the word embeddings to two

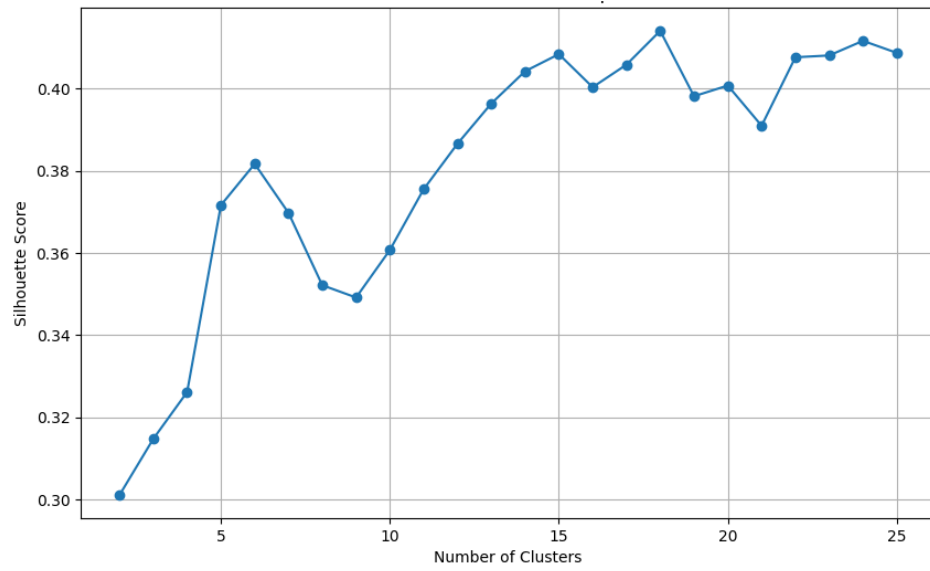
387 dimensions. This reduction allowed for the creation of a scatter plot that visually  
388 represents the relationships between mood words.

389 Finally, K-means clustering was applied to the reduced embeddings to group  
390 semantically similar mood words into distinct clusters. The evaluation of clustering  
391 performance used two widely accepted metrics: the Silhouette Coefficient (Shahapure  
392 & Nicholas, 2020) and the Calinski-Harabasz Index (Wang & Xu, 2019) – a range of  
393 cluster values ( $K$ ) to find the optimal number of clusters. A higher score in both metrics  
394 signifies more cohesive and well-separated clusters, suggesting better semantic quality  
395 and interpretability of the clustering results.

396 Specifically, in Figure 4, Silhouette Coefficient peaks at around  $K=18$ , suggesting  
397 that 18 is the optimal number of clusters. Although the silhouette score increases  
398 marginally for  $K>18$ , this trend is inconsistent, with fluctuations indicating diminishing  
399 returns from increasing the cluster number. In Figure 5, t-SNE scatter plots provide a  
400 two-dimensional representation of the clusters. Each point represents a mood word,  
401 and colour or label differentiation indicates cluster assignments at  $k=18$ , showing  
402 semantic cohesion within clusters and the distinct separation between clusters. In  
403 Figure 6, the Calinski-Harabasz index peaks at around  $K=18$ . While increasing beyond  
404  $K=21$  might marginally improve the clustering quality, it could result in overfitting,  
405 and the trade-off between interpretability and quality should be considered. Figure 7  
406 shows a t-SNE scatter plot with each cluster distinct. Based on the Silhouette  
407 Coefficient and the Calinski-Harabasz Index,  $K=18$  provides a stable and noticeable  
408 improvement in clustering quality. Consequently, the 18 clusters of mood words are  
409 detailed in Appendix 2.

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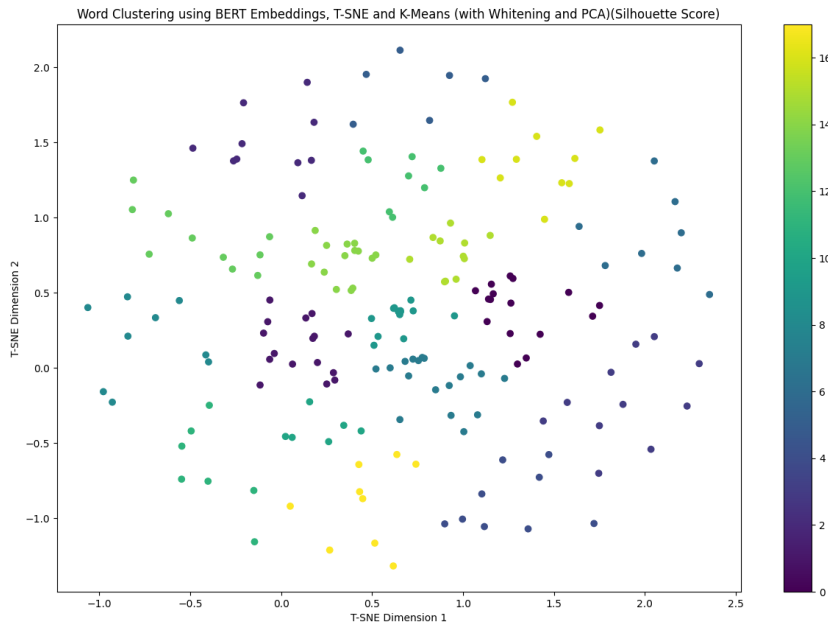
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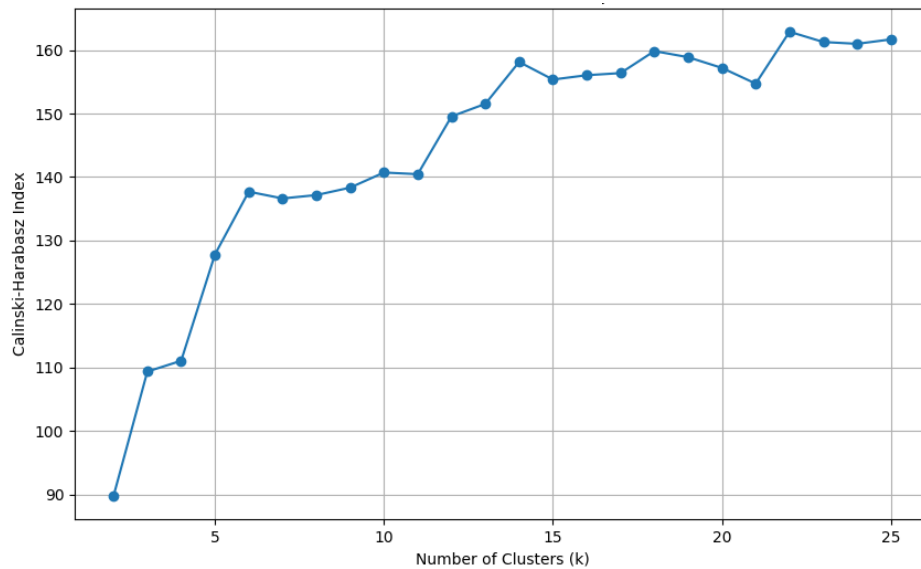
**Figure 4.** Silhouette Score Index for Optimal K.



414

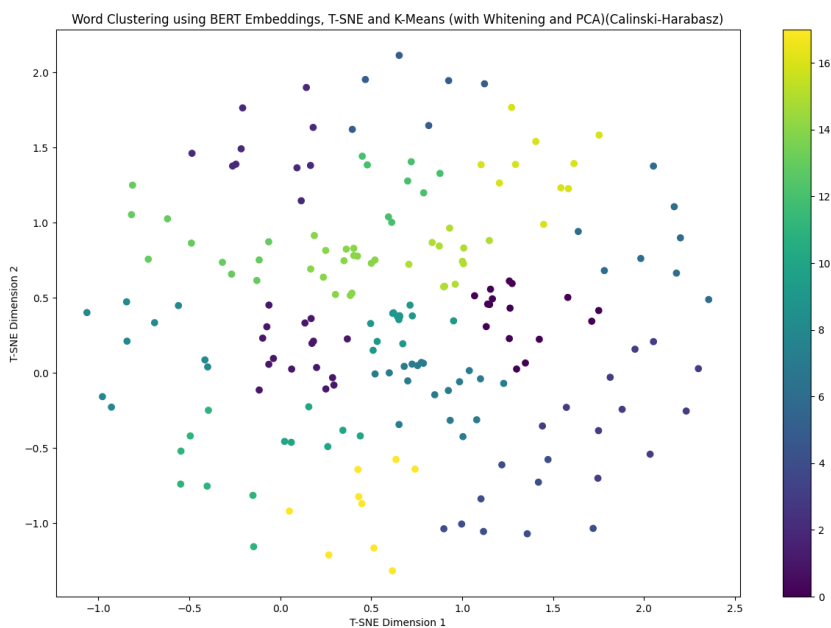
415

**Figure 5.** Two-Dimensional Scatter Plot for Mood Words Set (Silhouette Score).



416  
417  
418

**Figure 6.** Calinski-Harabasz Index for Optimal K.



419  
420  
421

**Figure 7.** Two-Dimensional Scatter Plot for Mood Words Set (Calinski-Harabasz).

422  
423  
424

In Study 2.2, five social science and Chinese cultural experts were invited into a lab to manually read all the clusters and select the most representative word from each cluster. The invited experts held a PhD degree or were PhD candidates in linguistics or

425 Chinese cultural studies. They were given the criteria that each representative word  
426 should be able to cover the semantic quality of its cluster and be associated with  
427 Chinese culture. This cross-cultural group of experts, who were American, Swiss,  
428 Korean, and Mexican and fluent in both Chinese and English, had lived in China for at  
429 least three years. A cross-cultural group of experts was selected for this study because  
430 the mood words are situated within a cross-cultural context.

431 To ensure that these instructions were consistently applied, we conducted a  
432 preliminary meeting with the experts to discuss the criteria in detail (details about the  
433 criteria and instructions given to the experts are in Appendix 3). During the selection  
434 process, if there were discrepancies among the experts regarding the most  
435 representative word for a cluster, we conducted a follow-up discussion to reach a  
436 consensus. This involved reviewing the semantic similarity, overall coherence, and  
437 Chinese aesthetics within each cluster, ensuring that a selected representative word  
438 captured the aesthetic mood expressed by the entire cluster. Within these, for example,  
439 *restrained* is a representative word from the cluster that includes the words *anxious*,  
440 *distressed*, *painful*, *worry*, *fear*, *oppression*, *frustration*, *frustrated*, *anger*, *sombre*, and  
441 *restrain*. This choice was made because the word *restrained* aligns with themes deeply  
442 ingrained in Chinese Confucian and Taoist culture. Confucianism emphasises self-  
443 discipline, moderation, and the suppression of individual desires for social harmony  
444 and collective well-being. Taoism seeks freedom through the alignment with the  
445 natural order and spontaneity, yet acknowledges the need for restraint to maintain  
446 balance and avoid excess (Wu, 2006). A refined word list was compiled based on the  
447 words identified as representative.

448 In Study 2.3, the definition of each aesthetic mood word was conceptualised based  
449 on descriptions from English-Chinese dictionaries and previous literature on moods in  
450 Chinese poetry. The dictionaries we used are *Oxford Advanced Learner's English-*  
451 *Chinese Dictionary* (Hornby, 2004) and *Xinhua Chinese Dictionary* (Lexicography  
452 Research Centre at the Commercial Press, 2001).

453 *Results*

454 Study 2 generated a word list of 18 aesthetic moods, as shown in Table 1.

455

456 **Table 1.** A Refined Aesthetic Mood Word List.

	Mood word	Definition
1	Untrammelled 豪放	It describes an extremely free, passionate and energetic feeling, usually felt after being released from something onerous. 形容一种强烈的, 奔放的情绪感受。
2	Ornate 绮丽	It describes a feeling of perceiving gorgeous colourfulness and fascination. 形容一种华丽的, 高贵的情绪感受。
3	Free 旷达	It describes a feeling of achieving self-satisfaction with one's situation. 形容一种开朗的, 豁达的情绪感受。
4	Floating 流动	It describes a continually drifting, fresh feeling. 形容一种变动的, 新奇的情绪感受。
5	Spontaneous 顿悟	It describes a feeling of serendipitously apperceiving something in a sudden moment. 形容一种在顿然间领悟某事的情绪感受。
6	Grand 沉着	It describes a calm, confident feeling in an imperturbable manner. 形容一种从容镇定、不慌不忙的情绪感受。
7	Ethereal 飘逸	It describes a free, delicate, lofty feeling in an otherworldly manner. 形容一种洒脱、雅致、与众不同的情绪感受。
8	Solitude 孤寂	It describes a feeling of enjoying freedom in dealing only with oneself. 形容一种避世的、自得其乐的情绪感受。
9	Tranquil 闲静	It describes a quiet, relaxing feeling. 形容一种安静放松的情绪感受。
10	Artless 质朴	It describes a feeling of enjoying the rustic vividness of nature. 形容一种返璞归真的情绪感受。
11	Emptiness of thoughts 空灵	It describes a spiritually void, meditative feeling. 形容一种精神上的放空、进而沉浸于思考的情绪感受。
12	Subtle	It describes an indirect, elusive feeling.

	含蓄	形容一种委婉的、耐人寻味的情绪感受。
13	Longing 憧憬	It describes a feeling of having something to which to look forward to. 形容一种对某种事情有期待的、向往的情绪感受。
14	Melancholy 愁思	It describes a worrisome, sorrowful feeling. 形容一种忧虑的情绪感受。
15	Poignant 酸楚	It describes a reluctantly compromised, dismal feeling. 形容一种委屈的、凄凉的情绪感受。
16	Chilling 寒心	It describes a trembling, painfully sad feeling. 形容一种战栗的、失望的、痛心的情绪感受。
17	Restrained 克制	It describes the feeling of seeking freedom from pain and fear by exerting control over one's desires. 形容一种通过自我约束以追求摆脱痛苦和恐惧的感觉。
18	Grave 悲慨	It describes a disheartened, extremely disappointed, grieved feeling. 形容一种心灰意冷的、失望的、悲伤的情绪感受。

457

458 **Study 3: Mood-Eliciting Images Selection**459 *Procedure*

460 In study 3.1, the researchers curated an initial collection of 180 Chinese aesthetic mood  
461 images (10 for each mood; see Appendix 4 for the overview). The image-selection  
462 approach was adapted from Desmet and Xue's study (2020) on mood typology, in  
463 which the authors argue that a comprehensive image collection could help to construct  
464 various aspects of a mood experience. Moreover, classical Chinese landscape poetry  
465 has long been associated with painting (Zhu, 2007), which relies on evocative imagery  
466 that indirectly expresses moods. In other words, classical Chinese poetry creates a  
467 lingering imagery in the reader's mind (Sundararajan, 2015, p.103).













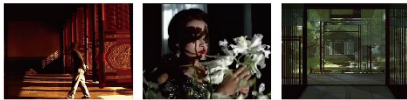

468 The image collection was selected from prevalent online image databases. Similar  
469 mood words from the word list were used as the search keywords to formulate suitable  
470 search queries. For example, the following search queries were used for the aesthetic  
471 mood of solitude: *solitary*, *lonely*, *free*, and similar words. Following Desmet and

472 Xue's (2020) criteria, each collected image should effectively elicit the target mood  
473 and have discrete explanatory power (i.e., 10 images belonging to one target mood  
474 have minimal overlap with each other).

475 Study 3.2 aims to select three images for each target mood from the initial image  
476 collection in the first step. Desmet and Xue (2020) asked participants to complete a  
477 questionnaire to test the degree to which each image represented the target mood.  
478 However, this method may exhaust participants, somewhat impacting the outcomes.  
479 Classical Chinese poetry is relatively obscure to participants; thus, this study invited  
480 Chinese culture experts to select mood-eliciting images to capture a more accurate  
481 vision. The researchers individually contacted five experts (as in Study 2.2). Each of  
482 them was informed of the aim of the study and then exposed to the 18 mood words and  
483 a total of 180 initial images. Within two hours, each expert was asked to rank every 10  
484 images for a target aesthetic mood and choose the three highest-ranked images. In cases  
485 where experts selected different images for a target mood, the researchers implemented  
486 a consensus-building approach as in Study 2.2.

#### 487 *Results*

488 For Study 3, we finalized the three highest-ranked images for each aesthetic mood (see  
489 Figure 8).

Mood 1: Untrammelled 	Mood 10: Artless 
Mood 2: Ornate 	Mood 11: Emptiness of thoughts 
Mood 3: Free 	Mood 12: Subtle 
Mood 4: Floating 	Mood 13: Longing 
Mood 5: Spontaneous 	Mood 14: Melancholy 
Mood 6: Grand 	Mood 15: Poignant 
Mood 7: Ethereal 	Mood 16: Chilling 
Mood 8: Solitude 	Mood 17: Restrained 
Mood 9: Tranquil 	Mood 18: Grave 

490 **Figure 8.** The Three Highest-Ranked Images for Each of the 18 Aesthetic Moods.  
491

## 492 **Study 4: Mapping Aesthetic Moods to the Circular Valence-Arousal Model**

### 493 *Procedure*

494 This stage mapped the 18 aesthetic mood words into the circular valence-arousal space.  
495 In Study 4.1, an online survey was conducted to map each mood word with the model.  
496 Participants completed a questionnaire on Amazon Mechanical Turk (MTurk), where  
497 they were presented with the four moods randomly, facilitated by the platform's  
498 randomization settings. In the questionnaire, each mood word was presented with the  
499 definition revealed in Study 2 and the mood-eliciting image selected in Study 3 (see  
500 the sample questionnaire in Appendix 5). Following previous literature measuring the  
501 Chinese affective model (Yik, 2009), a bipolar rating scale – namely, two nine-point  
502 scales ranging from “extremely unpleasant” to “extremely pleasant” and “extremely  
503 sleepy” to “extremely aroused” – was used.

504 Study 4.2 used data obtained in Study 4.1 to place target moods in the circular  
505 valence-arousal space (see details in the following section, “Data analysis and results”).

### 506 *Participants*

507 A total of 360 participants were recruited from MTurk to ensure a cross-cultural context  
508 for this research. The sample comprised 180 participants whose first language was  
509 Chinese and 180 participants whose first language was English, all of whom were  
510 fluent in both languages. This design allows for a comprehensive exploration of  
511 aesthetic moods across different cultural backgrounds. The participants included 168  
512 males and 192 females, with a mean age of 32.54 years.

### 513 *Data analysis and results*

514 A descriptive analysis was performed on the participant's responses to each aesthetic  
515 mood, as shown in Table 2.

516

517

518

519

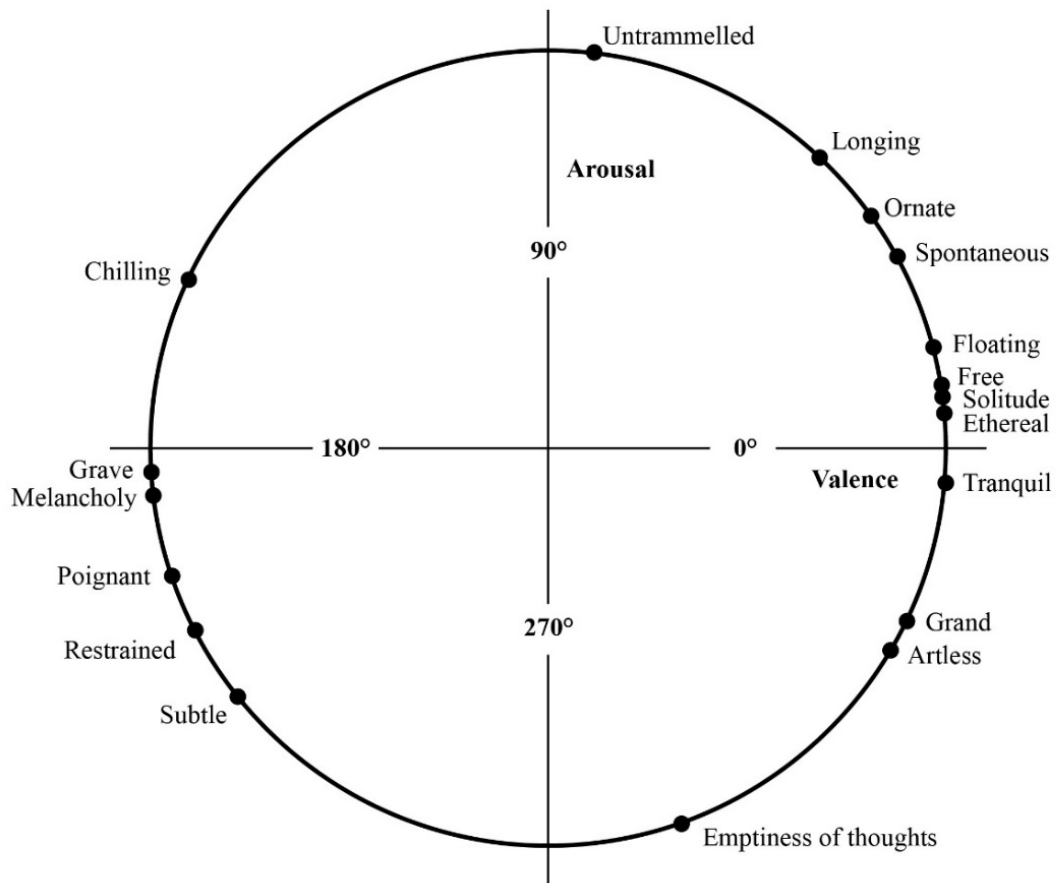
520 **Table 2.** Descriptive Statistics on Participants' Evaluation (N = 360).

	<b>Aesthetic mood</b>	<b>Mean (Valence)</b>	<b>Mean (Arousal)</b>
1	Untrammelled	5.03	5.36
2	Ornate	5.52	5.46
3	Free	5.58	5.11
4	Floating	7.12	5.20
5	Spontaneous	5.34	5.23
6	Grand	5.11	4.93
7	Ethereal	5.5	5.06
8	Seclusive	5.54	5.09
9	Tranquil	5.67	4.93
10	Artless	5.24	4.82
11	Emptiness of thoughts	5.09	4.68
12	Subtle	4.52	4.53
13	Longing	5.17	5.23
14	Melancholy	3.92	4.85
15	Poignant	4.36	4.73
16	Chilling	4.41	5.34
17	Restrained	4.52	4.70
18	Grave	3.23	4.89

521

522 The mapping of each mood to the circular valance-arousal space in this study was  
523 adapted from Yik's (2009) study on emotions in the Chinese context. The location of  
524 a target mood was determined by the blending of its valance and arousal – as the bipolar  
525 axes in the circular valance-arousal space, the centre of the circle is valence = 5.0,  
526 arousal = 5.0. For instance, the mood of floating (流动) had a mean (valence) = 7.12  
527 and a mean (arousal) = 5.2, with an angle of  $\sim 14.4^\circ$ . This implies that the floating  
528 mood made participants feel relatively unpleasant and slightly aroused compared to the  
529 free mood. Figure 9 shows all 18 aesthetic moods in the circular valance-arousal model.

530



531 **Figure 9.** A Total of 18 Aesthetic Moods in the Circular Valence-Arousal Model.

## 532 **Study 5: Mood-Focused Diary Episode Pairing**

### 533 *Procedure*

534 In Study 5.1, participants were asked to describe three everyday episodes in their diaries  
535 that were related to aesthetic moods expressed in classical Chinese landscape poems  
536 over the course of two weeks. Study 5.2 pairs specific moods with the diary episode  
537 collected in Study 5.1. An online survey was conducted to ask each participant to  
538 complete a questionnaire on MTurk that paired diary episodes with the 18 aesthetic  
539 moods (see the sample questionnaire in Appendix 6). Participants were randomly  
540 presented with four diary episodes and were instructed to select the three moods they  
541 felt were most relevant to each diary episode, facilitated by the platform's  
542 randomization settings.

### 543 *Participants*

544 In Study 5.1, 30 participants were recruited through posters and received an incentive  
545 of USD 8. Their ages ranged from 21 to 42 years, with a mean age of 27.33 years,  
546 including 14 males and 16 females. Participants were selected based on two criteria: (a)  
547 their likelihood of encountering poetry or Chinese culture through their occupations or  
548 lifestyles, and (b) their ability to reflect on and express their emotions. Many  
549 participants were designers with a keen interest in Chinese elements, including poetry,  
550 while others enjoyed reading or practicing the calligraphy of classical Chinese poetry.  
551 All participants spoke Chinese as their first language and had received over two years  
552 of academic education in English. To ensure a range of perceptions regarding Chinese  
553 poetry, participants were drawn from various regions, including Hong Kong, Hunan,  
554 Anhui, Beijing, and Shenzhen, reflecting key economic and cultural areas across China.

555 In Study 5.2, the pairing process involved 360 participants (168 males and 192  
556 females) recruited through the MTurk platform. Of these, 180 identified Chinese as  
557 their first language and 180 identified English as their first language, with all  
558 participants being comfortable reading both languages. The mean age was 32.54 years.

559 *Data analysis and results*

560 In Study 5.1, 48 diary episodes were selected based on the completeness of the  
 561 descriptions and were translated into English by a professional translator. Their selected  
 562 classical Chinese landscape poems were translated from peer-reviewed publications  
 563 into English.

564 Based on data collected in Study 5.2, the participants' responses were descriptively  
 565 analysed; Table 3 shows the results. Subsequently, each diary episode was paired with  
 566 specific moods.

567

568 **Table 3.** Results of the Descriptive Data Analysis.

Episode	Highest frequency		Second-highest frequency		Third-highest frequency	
	Mood	Percentage	Mood	Percentage	Mood	Percentage
1	1	15.5	3	14.4	9	9.3
2	14	13.9	13	9.9	9	7.9
3	2	11.1	15	8.1	4, 5, 7	7.1
4	1	11.8	3,9	9.8	-	-
5	3	15.4	1, 4, 5, 6	8.7	-	-
6	2, 6	13.1	-	-	5,8	11.1
7	7	13	1	12	2,4	11
8	6	13	3	9	1, 2, 5, 7, 8, 10	7
9	3	13.5	1	12.5	4	10.4
10	3	13.7	4	11.6	6	10.5
11	4	14.7	3	11.6	7	10.5
12	7	10.4	3, 6	9.4	-	-
13	3	13	2, 7	10.9	-	-
14	3	13.5	9	11.2	1, 6	9
15	2	11.2	3	9	4, 5	7.9
16	2	12.1	3	9.9	4	8.8
17	3	15.2	1	13.1	4, 9	11.1
18	3	14.6	1, 4, 5, 7	9.4	-	-
19	8	10.4	3, 4, 6	9.4	-	-
20	7	10.1	1, 2, 4, 6	7.1	-	-
21	1, 3	12.2	-	-	5	11.1
22	3, 8	10	-	-	7	8.9
23	3, 6	10.1	-	-	8	9

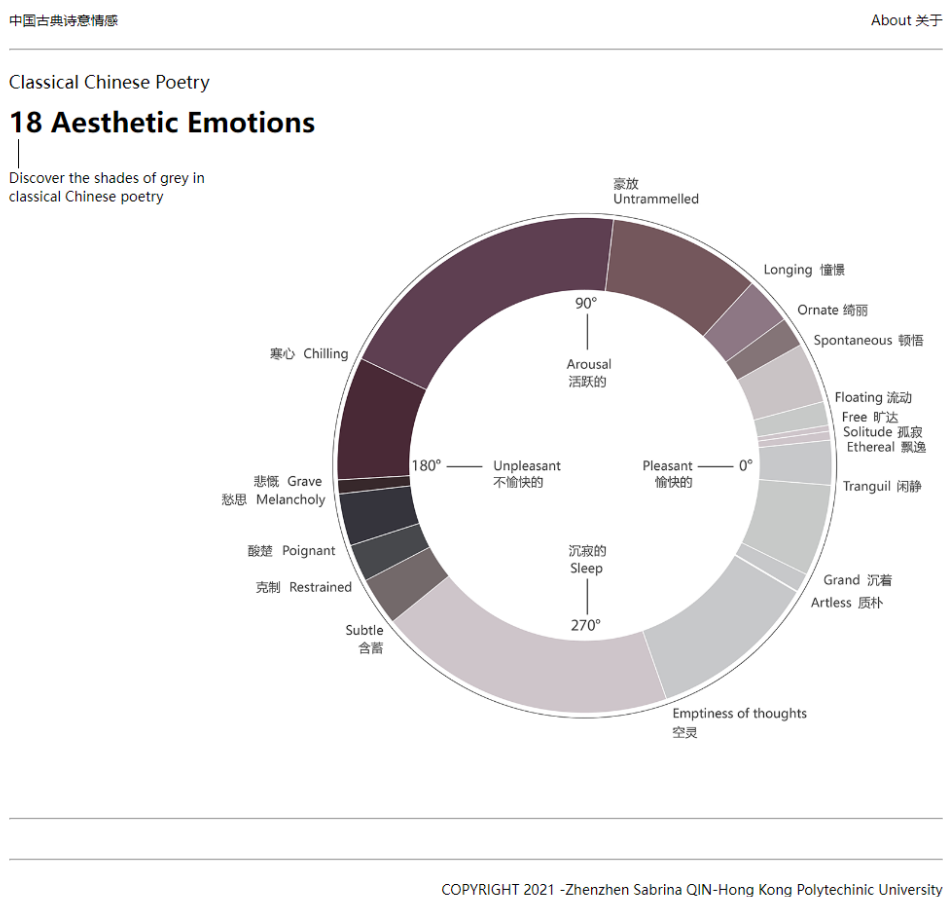
24	9	10.2	3,4	9.1	-	-
25	7	10.2	1,8	9.3	-	-
26	9	14.3	3	11.4	4	10.5
27	5	11	1, 6	8.3	-	-
28	3	12.6	8	10.8	4	9
29	9	12.5	4	11.5	14	10.4
30	3	14.9	1, 6	10.6		
31	8, 13	11.8			3, 4	8.6
32	3	16.1	4	10.8	7	9.7
33	6	13.2	15	9.9	1	8.8
34	8	12	15	10.9	4	8.7
35	3	15.7	5	12.4	2	11.2
36	3	11.1	8	10	11	8.9
37	1	13.3	3, 6	10.5		
38	2	13.6	3	12.6	4	11.7
39	3	11.7	2, 8, 15	9.7		
40	5	9.8	1	8.8	3	7.8
41	1	9.6	2, 3, 13	8.7		
42	6	13.2	1	11.3	8	10.4
43	12	10.1	1	9.2	6, 14	8.3
44	3, 6, 8	9.2				
45	1	15.7	3	11.8	2	9.8
46	1, 3, 4	10.2				
47	3	12.2	1	11.2	6	10.2
48	1	14	3, 4	11		

569 Note: Mood 1: untrammelled; Mood 2: ornate; Mood 3: free; Mood 4: floating; Mood 5:  
570 spontaneous; Mood 6: grand; Mood 7: ethereal; Mood 8: solitude; Mood 9: tranquil; Mood 10:  
571 artless; Mood 11: emptiness of thoughts; Mood 12: subtle; Mood 13: longing; Mood 14:  
572 melancholy; Mood 15: poignant; Mood 16: chilling; Mood 17: restrained; Mood 18: grave.  
573

#### 574 **Study 6: Database-Building**

575 The results developed from Study 1–5 formed the basis of the database of the aesthetic  
576 moods in classical Chinese poetry. This database was programmed as a website  
577 designed to make aesthetic moods accessible engagingly  
578 (<http://www.aestheticemotions.cn/>). The mapped circular valence-arousal model  
579 developed in Study 4 was used to visualise all mood granularity comprehensively.

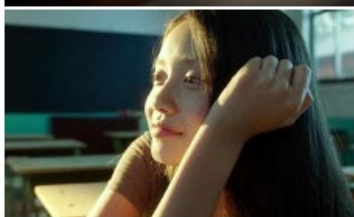
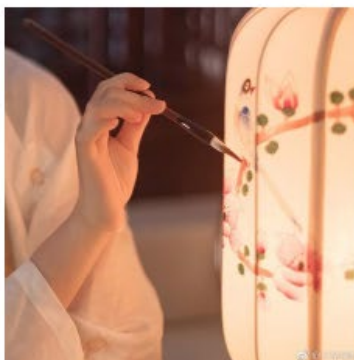
580 Different greys were selected to represent the identified mood words. Our database was  
 581 designed so potential users could start from the overview of all aesthetic mood tags in  
 582 a circular order based on the valence-arousal model. Each mood word functioned as a  
 583 tag for viewing the database’s relevant textual episodes and mood-eliciting images (see  
 584 Figure 10 and Figure 11).



585 **Figure 10.** The Homepage of the Online Database.

Longing 憧憬 It describes a feeling of having something to look forward to.  
形容一种对某事情有期待的、向往的情绪感受。

Emotion-eliciting images  
情绪图片



Related poems and episodes  
相关诗句与情节

Poem 诗句:  
Moored at melon islet(王安石, 泊船瓜洲)  
The vernal wind has greened the Southern shore again.  
When will the moon shine bright on my return? O  
when?(Xu Yuanzhong) Spring wind of itself turns the  
south shore green,But what bright moon will light me  
home?(Translated by Burton Watson).  
春风又绿江南岸, 明月何时照我还?

Every time the Spring Festival approaches and the day of family reunion comes, I am always reminded of the deep feeling of homesickness in my heart. As a native of Anhui province living in Chengdu, I have been away from home for 30 years. I remember how happy I had been when I visited my home, with all my friends and family around me. Nowadays, the graves of my grandparents are covered with weeds that grow freely. Meanwhile, my childhood playmates are scattered and drifting in different places, rarely seeing each other. With such a situation, I find it difficult to tell whether it is still my home or a foreign land. Hence, I feel my anticipation over going back to celebrate the New Year there slowly fading.

每当临近春节, 到了家人团聚的日子, 总会勾起我内心浓浓的思乡之情。作为一个生活在成都的安徽人, 算起来我离开家乡已经有30年了, 想起我刚回家回来时, 亲朋好友都在身边, 多么一副其乐融融的景象。如今, 爷爷奶奶的坟头已经长满了肆意生长的杂草, 儿时的玩伴也多数漂泊在各地, 很难能见到面, 这样的状况, 一时间究竟是家乡还是异乡似乎也难以分清, 就这样过年回家的期待慢慢淡了。

Poem 诗句:  
A twig of mume blossoms(李清照, 一剪梅)  
As fallen flowers drift and water runs their way,One  
longing overflow;Two places with same woes.  
花自飘零水自流, 一种相思, 两处闲愁。

Recently, we celebrated the graduation season. On my way home, my headphones played my favourite music while I lamented the hardships and difficulties I experienced in the past few years of studying abroad. Although I feel an extreme longing for my family sometimes, I do not share those feelings and my struggles with them because I do not want them to excessively worry about me. Even though I know they were missing me just as much, I can only worry about two things.

最近是毕业季, 一个人回家的路上, 耳机里播放着喜欢的音乐, 感叹自己这几年在外的留学生活, 有很多的艰辛与不易, 自己就像是花谢飘零, 有时候很想家人, 但为了避免他们过多的担心, 很多事情也无法告诉他们, 即使知道他们也如同我一样在思念, 但大概也只能“两处闲愁”了。

586 **Figure 11.** The Detail Page for the Longing Mood in the Online Database.  
587 (<http://www.aestheticemotions.cn/longing.html>)  
588

## 589 **Discussion**

### 590 **Key Findings**

591 This study's main finding is that people can distinguish at least 18 aesthetic moods in  
 592 classical Chinese poetry, in contrast to the classical mood typology of Sikong Tu's  
 593 *Twenty-Four Poetic Moods*. Our analysis revealed that ambiguous moods in Sikong  
 594 Tu's typology, such as 委屈 (*wěi qu*), 清奇 (*qīng qí*) and 超诣 (*chāo yì*), were  
 595 clustered into similar categories based on empirical investigation. This clustering by  
 596 NLP may be attributed to shared underlying semantic characteristics in English  
 597 translations of mood words collected in this study.

598 The 18 identified aesthetic moods present a notable departure from existing  
 599 aesthetic-emotion lexicons and mood classifications. For instance, Schubert (2024)  
 600 primarily identified emotions based on valence – revealing positive emotions like  
 601 admiration when compared to negative ones like dissatisfaction, both of which are  
 602 closely tied to everyday experiences. Similarly, Xue et al. (2020) propose a mood  
 603 typology that classifies moods as negative, positive or ambiguous, reflecting various  
 604 cognitive affects, such as “friendly” in the positive domain and “stressed” in the  
 605 negative. In contrast, this study's aesthetic moods derived from classical Chinese  
 606 poetry underscore a richness of poetic expression that transcends ordinary experiences.  
 607 For example, the mood of *ethereal* encapsulates a sense of freedom, delicacy and  
 608 loftiness, evoking an otherworldly quality through evocative imagery – such as peaks  
 609 rising above clouds, untouched by human presence (see Figure 8).

### 610 **Mood Characteristics**

611 Our findings provide initial evidence that, despite similarities in the valence-arousal  
 612 model, aesthetic moods in classical Chinese poetry can differ significantly in their  
 613 visual and semantic impact. This highlights the nuanced differences between these  
 614 moods regarding their subtle impact on sleepiness or arousal in the circular valence-  
 615 arousal model. The findings support our argument that aesthetic moods in classical  
 616 Chinese poetry extend beyond mere bodily responses linked to event-emotion  
 617 relationships. For instance, our findings suggest that the moods of *floating*, *free*,

618 *solitude* and *ethereal* are located close to each other in the circular valence-arousal  
619 model (see Figure 9). This proximity indicates that these moods elicit slight arousal and  
620 pleasant feelings; however, they primarily differ in their visual imagery, which results  
621 in varying meanings (see Figure 8). Specifically, *floating* depicts vividness and vitality  
622 akin to water; *free* presents an expansive and comfortable perspective; *solitude* portrays  
623 a reclusive figure in nature; and *ethereal* depicts peaks emerging in the mountains,  
624 devoid of human presence. While the moods of *grand* and *artless* evoke comparable  
625 valence-arousal responses, they manifest distinct visual imagery: *artless* is associated  
626 with natural vividness, whereas *grand* often involves human figures exhibiting a calm  
627 and confident demeanour.

628 These nuances highlight the complexity of aesthetic moods in classical Chinese  
629 poetry and its capacity to evoke diverse moods through varied imagery. As  
630 Sundararajan (2015) argues, classical Chinese poetry employs the approach of *Xing* to  
631 elicit imagery in the reader's mind, and then the reader reflects on this imagery – leading  
632 to a subsequent affective response and aesthetic savouring. This affective impact can  
633 be connected to Western frameworks that understand emotion through the valence-  
634 arousal model. However, the aesthetic moods in classical Chinese poetry offer a unique  
635 visual and semantic interpretation of *Xing*, resulting in a richness of meaning, emotion  
636 and imagery that differs from conventional Western approaches.

637 Moreover, some moods exhibit similar responses along one dimension while  
638 differing in another. For example, the moods of *grave*, *poignant* and *restrained* all lead  
639 to unpleasant feelings within the valence-arousal model; however, they vary in the  
640 degree of arousal, with *grave* being the most arousing and *restrained* the least. As stated  
641 in Study 2, the *restrained* mood reflects a cognitive-affective response that seeks  
642 freedom from self-discipline, aligning with themes deeply ingrained in Chinese  
643 Confucianism that emphasise moderation and the suppression of individual desires.  
644 This mood exemplifies a high degree of self-reflexivity and detachment from emotions,  
645 resulting in less unpleasantness and arousal compared to the *grave* and *poignant* moods.

646 The results of this study identify several negative mood categories based on  
647 the valence-arousal model, such as *solitude*, which are involved in pleasant experiences

648 – supporting our argument on the optimistic solitude rooted in Chinese culture.  
649 Functional magnetic resonance imaging (fMRI) shows that classical Chinese poetry  
650 contains complex and abundant emotions (Gao & Guo, 2018). This richness may stem  
651 from the frequent mixed-emotional states experienced by Chinese individuals, who  
652 embrace dialectical thinking that permits the simultaneous experience of positive and  
653 negative emotions (Sundararajan, 2015). Our findings contribute to the current  
654 literature on the mood granularity in design practice (Desmet & Xue, 2020a; Xue et al.,  
655 2020); their results revealed ambiguous moods without a clear valence, such as *restless*,  
656 *sentimental* and *serious*. By introducing additional ambiguous moods such as *solitude*,  
657 derived from classical Chinese poetry, we expand the understanding of mood  
658 complexity within this field.

659 Our study identifies several culturally meaningful moods through technology-driven  
660 approaches, such as the moods *restrained*, *emptiness of thoughts* and *spontaneous*. The  
661 *restrained* mood underlines the self-discipline in Confucian belief and freedom in  
662 Taoist belief, and shows unpleasant and relative sleepy in the valence-arousal model.  
663 The mood-eliciting images of *restrained* depict figures under restrained conditions,  
664 such as symbolic shadows and door frames. The *spontaneous* mood visualises a  
665 perceptual moment of serendipitously apperceiving something in Buddhism, and its  
666 selected mood-eliciting image depicts a Buddhist symbol of a tiny lotus petal drifting  
667 on a lotus leaf. The *emptiness of thoughts* mood is sleepy and slightly pleasant in the  
668 valence-arousal model, visually depicted as tiny figures in clean and vast space. This  
669 mood originated from Taoist belief that stresses aloofness from worldly concerns;  
670 consequently, it depicts a spiritually void and meditative feeling. In the diary episode  
671 collected in Study 5, a participant selected the poem, “After one night of wind and  
672 showers, how many are the fallen flowers?” This poem is associated with the  
673 participant’s written episode about a casual visit to a bookstore, which led to thoughts  
674 about the neglected books which nobody cares about. According to previous literature  
675 (Van Gordon et al., 2021), Taoist philosophy and Buddhism provided the wisdom of  
676 undermining suffering by cultivating insight into existence. This might explain why

677 *spontaneous and emptiness of thoughts* elicit relatively pleasant experiences in the  
678 valence-arousal model.

679 Confucianism, Taoism, and Buddhism have formed the foundational aesthetic  
680 philosophy of Chinese art and poetry throughout history (Peng, 2021, pp. 8–14). Chang  
681 (2011) examines classical Chinese poetry, arguing that Taoism’s emphasis on nature  
682 and spontaneity often creates a tranquil mood in reflective moments. Similarly, the poet  
683 Wang Wei, renowned in Chinese history, often uses the word *empty* (*kōng*, 空) to  
684 depict landscapes – a concept rooted in Buddhism, which views the world as both  
685 illusory and real (Yu, 1981). Thus, these findings enrich the current understanding of  
686 emotions among the Chinese population (Yik, 2009) by investigating the aesthetic  
687 moods in classical Chinese poetry.

### 688 **Methodological Contributions**

689 Though previous works on mood-focused design contribute to identifying mood  
690 granularity (Xue et al., 2020), this study exemplifies a methodological framework that  
691 combines technology-driven approaches and cultural factors. First, a combination of  
692 NLP and an expert panel was utilised for aesthetic mood-word clustering, offering  
693 advantages in mitigating potential subjective bias compared to traditional approaches  
694 relying on a single expert panel. For instance, Xue et al. (2020) refined mood words  
695 from the initial collection set based on researchers’ judgments.

696 Second, this study adapts the circular valence-arousal model from the original two-  
697 dimensional model (Desmet et al., 2016) to help researchers and designers visually  
698 analyse aesthetic moods from a unique cultural source: classical Chinese poetry.

699 Finally, diary episodes, as in the previous works (Desmet et al., 2001; Xue et al.,  
700 2020), were associated with poems, resulting in in-depth cognitive-affective processing  
701 of a target mood.

### 702 **Conclusion**

703 Aesthetic moods have long attracted scholars’ attention when interpreting creative  
704 practice (Xue et al., 2020) but are illusory in empirical studies (Schubert, 2024).

705 Moreover, aesthetic moods in classical Chinese poetry, carrying double values in  
706 culture and aesthetics, lack nuanced empirical investigation of their mood granularity  
707 and cognitive-affective response. Despite their frequent use as cultural inspirations, a  
708 comprehensive, evidence-based investigation has been lacking into how people  
709 perceive and differentiate aesthetic moods in classical Chinese poetry. Aesthetic moods  
710 in classical Chinese poetry are cognitive states associated with imagery, meaning and  
711 emotion. This study addresses this gap by illustrating how these aesthetic moods can  
712 be systematically identified, classified, and quantified into a database. These findings  
713 enrich current studies on aesthetic emotions and mood typology, mainly in the Western  
714 context (Schubert, 2024; Xue et al., 2020), by providing an Eastern source of classical  
715 Chinese poetry. Our findings facilitate culturally mood-focused applications in design  
716 and other creative fields. Scholars argue that a nuanced comprehension of emotional  
717 subtleties can amplify the aesthetic impact of creative works (Xue et al., 2020).

718 Utilising a taxonomy approach (Smith, 2002), Our research makes the aesthetic  
719 moods embedded in classical Chinese poetry accessible through various media.  
720 Specifically, this study quantitatively identified 18 distinctive aesthetic mood clusters  
721 in classical Chinese poetry. These clusters were paired with relevant tools: mood-  
722 eliciting images, the circular valence-arousal model and verbal episodes associated with  
723 specific poems. The outcomes were developed into a website that serves as a practical  
724 database, visualising the granularity of aesthetic moods expressed in classical Chinese  
725 poetry and relevant elements for mood-focused research and practice. Mood-eliciting  
726 images visually represent target moods, while diary episodes and poems serve as verbal  
727 expressions.

728 Like shades of grey, the aesthetic moods in classical Chinese poetry revealed in this  
729 study are not discrete in the valence-arousal model. They differ significantly in their  
730 visual and semantic impact. Our findings contribute to the current understanding of  
731 aesthetic moods in classical Chinese poetry by providing a nuanced taxonomy. This  
732 taxonomy highlights the visual and semantic ways these aesthetic moods are expressed  
733 and perceived, differing from a general positive-negative categories in previous studies  
734 on aesthetic emotions and moods (Schubert, 2024; Xue et al., 2020).

## 735 **Limitations**

736 First, while concerns about potential inconsistencies between subjective and objective  
737 approaches are valid, we contend that an inter-rater reliability assessment is  
738 unnecessary for each individual study within this research. This is because each study  
739 within the framework employs distinct methodologies and focuses on different  
740 materials, rendering such an assessment less applicable. For instance, Study 2 employs  
741 a combination of machine-learning techniques and expert-panel review for word  
742 clustering, whereas Study 4 involves mapping aesthetic mood words and images onto  
743 a circular valence-arousal model through an online survey. Given the diverse methods  
744 used to address unique aspects of the research, inter-rater reliability would not  
745 meaningfully contribute to evaluating the consistency of findings across these varied  
746 approaches. Future research could incorporate reliability checks where feasible. For  
747 instance, in studies involving expert panels, multiple rounds of independent evaluations  
748 could be conducted, followed by consensus-building discussions.

749 Second, the cultural and linguistic backgrounds of participants could have  
750 introduced variability in mood identification. While we ensured that all participants  
751 were fluent in both Chinese and English, cross-cultural differences in emotional  
752 expression and interpretation may have affected how participants perceived aesthetic  
753 moods. Although the inclusion of both native Chinese and English speakers was  
754 intended to capture diverse perspectives, it may have also led to variability in responses  
755 due to differing cultural interpretations. Future studies could include a more structured  
756 analysis of how cultural differences affect mood interpretation.

757 Third, participants' varying levels of familiarity with classical Chinese poetry may  
758 have influenced their ability to identify and interpret the moods in this study accurately.  
759 Familiarity and situational embedding were the main factors mediating mood empathy  
760 (Lüdtke et al., 2014). Differences in exposure to this literary tradition could have shaped  
761 their understanding and responses. Future studies could control for participants'  
762 familiarity with classical Chinese poetry by either pre-screening for prior exposure or  
763 measuring familiarity levels as part of the data collection process.

764 Fourth, individual differences, such as participants' emotional states at the time of  
765 the survey, may have affected their sensitivity to the moods conveyed in the poetry.  
766 These emotional states were not controlled for; we acknowledge that they could have  
767 influenced participants' responses during the study. Future studies could include a brief  
768 pre-survey to assess participants' mood or emotional state.

769 Fifth, the primary contribution of this study is to present a methodological  
770 framework for quantifying aesthetic moods; future research could further evaluate  
771 perceptual outcomes generated from the database. For instance, it would be valuable to  
772 assess the impact of the database in creative practice and among different populations.  
773 Such evidence would enrich the current literature on cross-cultural design practices and  
774 help validate the framework in broader contexts.

775 Finally, potential biases associated with using BERT as an NLP method exist. While  
776 BERT is a robust tool, biases may arise at various stages, particularly during the  
777 refinement of mood words, stemming from training data and the subjective nature of  
778 mood interpretation. Future research should explore additional methods for refining  
779 mood words and assess the impact of these biases on results.

## 780 **Declaration of Conflicting Interests**

781 The authors declared no potential conflicts of interest regarding this article's research,  
782 authorship, or publication.

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951 **Appendix 1**952 **Initial mood words**

<b>Words collected from interviews and the survey</b>				
1. Warm	2. Tranquil	3. Depressing	4. Peaceful	
5. Interesting	6. Relaxing	7. Downheartedness	8. Complicated	
9. Emptiness of thought	10. Sad	11. Calm	12. Indifferent	
13. Nice	14. Subtle	15. Change constantly	16. Natural	
17. Lonely	18. Stillness	19. Sentimental	20. Romantic	
21. Longing	22. Vague	23. Sorrow	24. Serendipitous	
25. Beautiful				
<b>Words collected from <i>Twenty-four Poetic Moods</i> by Sikong Tu (837-908)</b>				
Mood word(Chinese)	English translation	English translation	English translation	Translation from researcher
	Owen, 1946	Yang & Yang, 1963	Giles, 1930	
雄渾	26. Potent-undifferentiated	27. The grand mode	28. Energy-Absolute	
沖淡	29. Limpid	30. The unemphatic mode	31. Tranquil Repose	
纖穠	32. Delicate-Fresh and Rich-Lush	33. The ornate mode	34. Slim-Stout	
沉著	35. Firm and Self-possessed	36. The grave mode	37. Concentration	38. restrain
高古	39. Lofty and ancient	40. The lofty mode	41. Height-Antiquity	
典雅	42. Decorous and Dignified	43. The polished mode	44. Refinement	

洗練	45. Washed and Refined	46. The refined mode	47. Wash-smelt	48. Pure and Refined
勁健	49. Strong and Sturdy	50. The vigorous mode	51. Strength	
綺麗	52. Intricate Beauty	53. The exquisite mode	54. Embroideries	
自然	55. Natural	56. The spontaneous mode	57. Natural	
含蓄	58. Reserve/Accumulation Within	59. The pregnant mode	60. Conservation	61. Subtle
豪放	62. Swaggering Abandon	63. The untrammelled mode	64. Se-free	65. uninhibited
精神	66. Essence and Spirit	67. The evocative mode	68. Animal-Spirits	69. spiritual essence
縝密	70. Close-Woven and DENSE	71. The well-knit mode	72. Close-Woven	73. densely woven
疏野	74. Disengagement and Rusticity	75. The artless mode	76. Seclusion	
清奇	77. Lucid and Wondrous	78. The distinctive mode	79. Fascination	
委曲	80. Twisting and Turning	81. The devious mode	82. In Tortuous Ways	
實境	83. Solid World	84. The natural mode	85. Actualities	
悲慨	86. Melancholy and Depression	87. The poignant mode	88. Despondent	
形容	89. Description	90. Vivid mode	91. Form and Feature	
超詣	92. Transcendence	93. The transcendent mode	94. The Transcendental	
飄逸	95. Drifting Aloof	96. The ethereal mode	97. Abstraction	
曠達	98. Expansive Contentment	99. The light-hearted mode	100. Illumined	
流動	101. Flowing movement	102. The flowing mode	103. Motion	
<b>Words collected from literature on Chinese poetry</b>				
Mood word	Source	Mood word	Source	
104. Solitary	Sundararajan, 2004	105. Fugitive	Yang Hsien-yi and Gladys Yang	

106. Detached		107. Courage	Ahmad et al., 2020	
108. Hate	Hou & Frank, 2015	109. Fear		
110. Remote		111. Cold	Elvin, 1998	
112. Anxious		113. Wintry		
114. Thin and pallid(憔悴)		115. Quiescent		
116. Miserable		117. Tragic		
118. Lovesick		119. Agony		
120. Aloof		Whincup, 1987		121. Oppression
122. Insecure	123 Self-absorbed			
124. Grief	125 Chill			
126 Wounded heart	127. Desolate(淒涼)			
128 lingering(徘徊)	129. Heartbreaking			
130 Floating	131. Bright			
132 Falling	133. Frustration			
134 Quirky	135. Leaving			
136 Vexes	137. Missing			
138 Lazy	139. Nostalgia			
140 Brooding	141. Ambition			
142 Alien	143. Bold and unconstrained			
144. Loneliness	Tang, 2014		145. Piacevole	
146 Homesickness			147. Praise	
148 dreary		149. Sorrow	Shu, 2018	

150 Distressed		151. Sadness	
152 Regret	Liu, 1979	153. Depressed	
154 Gloomy		155. Frustrated	
156. Grief		157. Anger	
158. Poignancy		159. Alone	
160. Pessimism		161. Nostalgia	
162. Painful		163. Yearning	
164. Lonely		165. Worry	
166. Disappointments		167. Anxious	
168. Free		169. Cold	
170. Despair			
172. Lofty		173. Poignant bitterness	
174 Emptiness	Yu, 2008	175. Pain	
176 Laments		177. Sombre	
178 Elusiveness		179. Chill	
180 bemoaning	Deng and Ma, 2015	181. Cruelty	
182 Grieving		183. Dreary	
184. Worry		185. Dismal	
186. Happy	Heule, 2018	187. Pathetic	
188. loneliness		189. Cruel	
190. Sorrow		191. Miserable	
192 Gloomy mourning		193. Tragic	

194. Nothingness		195. Painfully sad	
196. Ethereal		197. Mourning	
198. Emptiness		199. Melancholy	
200. Heart-aching		201. Bleak	
202. Unbearing	Sundararajan, 2015	203. Pale	Wang, 1989
204. Quietness		205. Heart-rending sorrow	
206. Calmness	Auracher et.al., 2010	207. Afraid	
		208. Frail	
		209. pining away(銷魂)	
		210. deep sorrow(濃愁)	

954 **Appendix 2**955 **A total of 18 clusters of emotion words**

Cluster	Emotion words	Representative word
1	disengagement and rusticity, leaving, seclusion, solitude, solitary, lonely, brooding, loneliness, alone	solitude
2	lazy, pessimism, pathetic, downheartedness, powerless, vex, falling, essence and spirit, alien, ethereal, the ethereal mode, abstraction, spiritual essence, lofty, the lofty mode, lofty and ancient, remote	ethereal
3	firm and self-possessed, strong and sturdy, the grand mode, the vigorous mode, courage, ambition, energy-absolute, height-antiquity, strength, self-absorbed	grand
4	potent-undifferentiated, swaggering abandon, unbearing, the untrammelled mode, fugitive, bold and unconstrained, set-free, actualities, uninhibited <sup>10</sup>	untrammelled
5	quirky, cruelty, cruel, poignancy, heart-aching, poignant bitterness, the poignant mode	the poignant mode
6	interesting, beautiful, intricate beauty, lovesick, the ornate mode, the exquisite mode, the evocative mode, the distinctive mode, the devious mode, , fascination, romantic, complicated , slim-stout, delicate-fresh and rich-lush, in tortuous ways, decorous and dignified, close-woven and dense, the well-knit mode, close-woven, densely woven, embroideries, concentration	the ornate mode
7	anxious, distressed, painful, worry, fear, oppression, frustration, frustrated, anger, sombre, restrain	restrain

8	transcendence, the transcendent mode, piacevole, the transcendental, emptiness of thought, detached, emptiness, nothingness, drifting aloof, aloof	emptiness of thought
9	nice, lucid and wondrous, solid world, expansive contentment, free, happy, praise, peaceful, washed and refined, wash-smelt, the polished mode, pure and refined, Refinement, The refined mode	free
10	limpid, stillness, missing, indifferent, quiescent, quietness, calmness, tranquil, calm, tranquil repose, relaxing,	tranquil
11	hate, insecure, gloomy, despair, sad, dismal, afraid, depressing, despondent, conservation, change constantly, tragic, melancholy and depression, regret, laments, gloomy mourning, sadness, depressed, mourning, melancholy, bemoaning	melancholy
12	the spontaneous mode, illumined, bright, the light-hearted mode, serendipitous	spontaneous
13	grief, wounded heart, grief, grieving, sorrow, agony, heartbreaking, pain, heart-rending sorrow, deep sorrow, disappointments, the grave mode, miserable	the grave mode
14	lingering, homesickness, nostalgia, sentimental, yearning, longing	longing
15	cold, chill, pale, pining away, dreary, desolate, painfully sad, bleak, wintry, thin and pallid, frail	chill
16	twisting and turning, flowing movement, the flowing mode, motion, floating	floating

17	elusiveness, subtle, vague, reserve/accumulation within, the pregnant mode, the unemphatic mode	subtle
18	form and feature, vivid mode, description, the natural mode, natural, animal-spirits, the artless mode	the artless mode

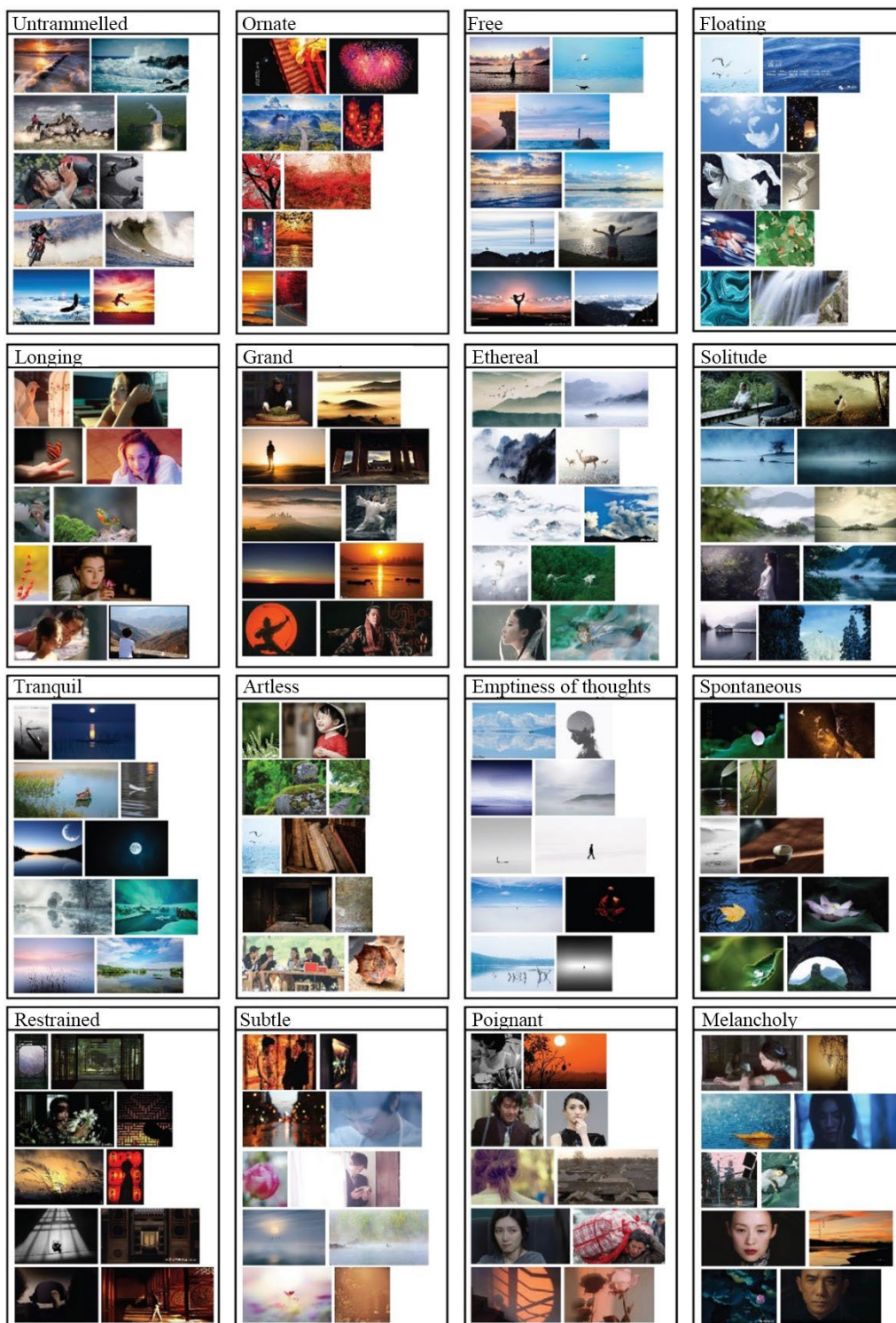
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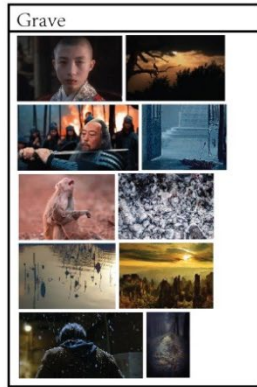
957 **Appendix 3**958 **Evaluation Criteria for Representative Word Selection**

Evaluation Criteria	Description
Semantic Quality	Experts were instructed to select representative words that encapsulate the essential meaning of the entire cluster, ensuring that each word reflects the semantic relationships among the clustered mood words.
Overall Coherence	Experts were asked to consider the internal consistency of the cluster, ensuring that the representative word logically fits within the context of the other words in the group.
Cultural Aesthetics	Given the focus on Chinese culture, experts were instructed to prioritize words that resonate with Chinese aesthetics and poetic expressions, thus ensuring cultural appropriateness and richness.

959 **Appendix 4**

960 **A total of 180 initial emotion-eliciting images**





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963 **Appendix 5**964 **Sample questionnaire**

Thank you for participating in this study, which is being conducted for design research purposes. Your participation will help us advance knowledge in this field, and your responses will contribute to research that may be published in academic journals. Please note that all data collected will remain strictly confidential and anonymous, and your identity will never be disclosed in any publications or reports. Participation is entirely voluntary, and you may choose to withdraw at any time by discontinuing the survey without any consequences. By proceeding, you acknowledge that you understand and consent to these terms. Thank you for your valuable contribution.

I have read and understood the information above, and I agree to take part in this study

Please identify your gender:

Male       Female

Please enter your age (in years) : \_\_\_\_\_

Please identify your education level

High school or lower       College       College graduate or higher

Please identify your first language:

Chinese       English


How much attention are you willing and able to dedicate to this study?

Very little       A whole lot

Instruction: In this section, you are going to evaluate four moods relevant to Chinese poetry from two dimensions: arousal and valence. Each mood word is illustrated by three images.

Mood word: Untrammelled 豪放


It describes an extremely free, passionate, and energetic feeling, usually felt after being released from something onerous. 形容一种强烈的, 奔放的情绪感受。


<p>I feel this mood is:</p> <p> <input type="radio"/> Extremely unpleasant    <input type="radio"/> Highly unpleasant    <input type="radio"/> Very unpleasant    <input type="radio"/> Slightly unpleasant </p> <p> <input type="radio"/> Neutral    <input type="radio"/> Slightly pleasant    <input type="radio"/> Very pleasant    <input type="radio"/> Highly pleasant    <input type="radio"/> Extremely pleasant </p> <p> <input type="radio"/> Extremely sleepy    <input type="radio"/> Highly sleepy    <input type="radio"/> Very sleepy    <input type="radio"/> Slightly sleepy    <input type="radio"/> Neutral    <input type="radio"/> Slightly aroused    <input type="radio"/> Very aroused    <input type="radio"/> Highly aroused    <input type="radio"/> Extremely aroused </p>

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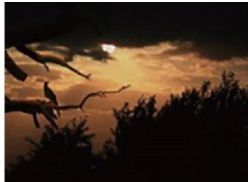

966 **Appendix 6**967 **Sample questionnaire**

<p>Thank you for participating in this study, which is being conducted for design research purposes. Your participation will help us advance knowledge in this field, and your responses will contribute to research that may be published in academic journals. Please note that all data collected will remain strictly confidential and anonymous, and your identity will never be disclosed in any publications or reports. Participation is entirely voluntary, and you may choose to withdraw at any time by discontinuing the survey without any consequences. By proceeding, you acknowledge that you understand and consent to these terms. Thank you for your valuable contribution.</p>
<p><input type="radio"/> I have read and understood the information above, and I agree to take part in this study</p>
<p>Please identify your gender:</p> <p><input type="radio"/> Male      <input type="radio"/> Female</p>
<p>Please enter your age (in years) : _____</p>
<p>Please identify your education level</p>

<input type="radio"/> High school or lower <input type="radio"/> College <input type="radio"/> College graduate or higher			
Please identify your first language: <input type="radio"/> Chinese <input type="radio"/> English			
How much attention are you willing and able to dedicate to this study? <input type="radio"/> Very little <input type="radio"/> A whole lot			
Instruction: In this section, you will evaluate four diary episodes associated with classical Chinese poems. For each episode, please select <b>three</b> moods that you find most relevant. To assist you, each mood is accompanied by corresponding images.			
Poem: From the heaven's peak the moon rises bright; Over a boundless sea of cloud (明月出天山, 苍茫云海间). <i>The Moon at the fortified pass</i> (关山月) by Li Bai(李白).  Diary episode: Every time I climb a mountain, I always have a casual glance at the beach of Hong Kong and look at the distant horizon, where the sea and sky meet in the distance. At this time, I seem to detach from my busy work. There is a sudden feeling of enlightenment, and my troubles appear to be swept away. Do not mention how relaxed the mood is . With the magnificence of the sea and the vastness of the sky, the troubles of the people between these two all seem extremely small.  每次爬山的时候, 总会不经意的看一眼香港的海边, 望着远处的地平线, 海天在远方交汇。这时, 自己好像从繁忙的工作中跳脱了出来, 有一种豁然开朗的感觉, 平时的烦心事一扫而光。心情别提有多么的轻松。海的壮美, 天的广阔, 人的烦恼在海天之间都显得无比渺小。			
	Mood	Mood-eliciting images	
1	Untrammelled 豪放		<input type="radio"/>

2	Ornate 绮丽				○
3	Free 旷达				○
4	Floating 流动				○
5	Spontaneous 顿悟				○
6	Grand 沉着				○
7	Ethereal 飘逸				○
8	Solitude 孤寂				○
9	Tranquil 闲静				○

10	Artless 质朴				○
11	Emptiness of thoughts 空灵				○
12	Subtle 含蓄				○
13	Longing 憧憬				○
14	Melancholy 愁思				○
15	Poignant 酸楚				○
16	Chilling 寒心				○
17	Restrained 克制				○

18	Grave 悲慨				○
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