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Relationships among Purchase Intentions for Luxury Brands and Personality Traits Based on the Big Five

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Abstract

Fujiwara and Nagasawa [1] verified differences in the degree of effect of the four psychological factors[1] that constituted Japanese people's preference for luxury brands[2] on the development of purchase intentions for luxury food and car brands[3]. This study is related to the study mentioned above and verifies the effects of consumers' personality traits on purchase intentions for these luxury brands. It uses a personality trait classification method called the "Big Five personality traits" to perform an empirical analysis of the way that the five dimensions of personality traits[4] influence purchase intentions for each brand. As a result, it suggests 1) that the purchase intentions of emotionally unstable consumers with a high dimension of Neuroticism for FERRARI and PORSCHE are significantly lower than those with a low dimension of Neuroticism and 2) that the purchase intentions of consumers who are highly devoted to art and have a high dimension of Openness to Experience for DOM PERIGNON, FERRARI, ROLLS-ROYCE and PORSCHE are significantly higher than those with a low dimension of Openness to Experience.

1. Introduction

Fujiwara and Nagasawa [1] examine the strong preference among Japanese people for luxury brands and make a

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[1]The four psychological factors are Differentiation from Others, Conformity to Group Norms, Avoiding Cognitive Dissonance and Quality Evaluation which were pointed out by Sugimoto [2].

[2]As to the definition of luxury, see the paper; Fujiwara and Nagasawa [1].

[3]I will examine GODIVA, TORAYA and DOM PERIGNON as luxury food brands and FERRARI, ROLLS-ROYCE and PORSCHE as luxury car brands.

comparative analysis of the psychological factors that influence the development of purchase intentions and how they differ between the food and car luxury brands (GODIVA, TORAYA, DOM PERIGNON, FERRARI, ROLLS-ROYCE and PORSCHE). As a result of empirical analysis using multiple regression analysis, their study suggests the following four points: 1) Differentiation from Others is an important factor in developing purchase intentions for both food and car luxury brands and is a particularly important factor for cars; 2) Conformity to Group Norms is not an important factor in developing purchase intentions for both food and car luxury brands in which consumers continue to feel a sense of rarity; 3) Avoiding Cognitive Dissonance is an important factor in developing purchase intentions for both food and car luxury brands; 4) Quality Evaluation is an important factor in developing purchase intentions for food luxury brands only.

This study is related to the study mentioned above and probes into the effects of different natures of consumers (which refer to differences in personal traits in this study) on their purchase intentions for the six brands listed above. The objective of the study is to demonstrate through empirical analysis what purchase intentions consumers with particular personal traits will show toward these brands.

As for the classification of personality traits, the Big Five personality traits, which have received much attention in recent years, have been used. This model explains personality traits using five factors, namely Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. For more information about this model, see Murakami and Murakami [3][5].

2. Previous Studies and the Purpose of This Research

Many researchers have pointed out that consumers' preference for luxury brands is developed by a variety of psychological factors (Vigneron and Johnson [4]). However, most of these studies only identify psychological factors for luxury brand loyalty and fail to closely examine the effects of psychological factors on purchase intentions.

Therefore, Fujiwara and Nagasawa [1] obtained the four suggestions shown in the previous chapter by performing multiple regression analysis with purchase intentions for luxury food and car brands as explained variables, and four psychological factors (Differentiation from Others, Conformity to Group Norms, Avoiding Cognitive Dissonance, Quality Evaluation) as explanatory variables. This indicated the general and specific characteristics of the strong effects of psychological factors that develop purchase intentions among different product categories. Fujiwara's and Nagasawa's study did not consider the different natures of consumers on their purchase intentions. For this reason, this study adds the different natures of consumers as a new perspective for closer examination.

3. Validation Methods and Hypotheses

A questionnaire survey was conducted for the same subjects as in Fujiwara and Nagasawa [1][6], and therefore, for more details, their paper should be referred to. This chapter explains about the Big Five personal traits, a new perspective used in this study, which probes into the different natures of consumers, and describes the personality trait classification method that the study applies to its subjects.

3.1. Validation Methods

As for the classification of personality traits, the Big Five personality traits will be used. The Big Five personality traits is a theory that has organized the various constructs on personality traits which have been used in the past into a framework consisting of five factors, namely Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience [5].

This paper utilizes the TIPI-J (Japanese Version of Ten Item Personality Inventory) (**Table 1**), which was developed by Oshio *et al*. [6] as a scale for measuring the Big Five factors. The questions were to be answered on a scale of 1 (I strongly disagree) to 7 (I strongly agree). After reverse scoring the questions, the scores for each

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[4]The five dimensions are Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.
[5]Murakami and Murakami gathered the results of research about the Big Five personality traits by many researchers and published them in a specialized book. I will describe consumer personality characteristics using this book as a reference on this paper.
[6]I collected 500 Japanese samples in their thirties and forties targeting households with an income of 10 million yen or more or assets of 50 million yen (financial assets and real estate).

Table 1. TIPI-J.

Big Five Factors	Question Order	Questionnaire Item (Reverse Scoring: Q6-10) I See Myself as:
Extraversion	1	Extraverted, enthusiastic.
	6	Reserved, quiet.
Agreeableness	2	Critical, quarrelsome.
	7	Sympathetic, warm.
Conscientiousness	3	Dependable, self-disciplined.
	8	Disorganized, careless.
Neuroticism	4	Anxious, easily upset.
	9	Calm, emotionally stable.
Openness to Experience	5	Open to new experiences, complex.
	10	Conventional, uncreative.

Source: Oshio *et al*. [6].

factor were added up and the totals were divided into the upper 25% and the lower 25% by using quartiles[7]. Then, the two groups were assigned as the high and low quartiles. The results of the surveys are shown in **Figure 1**. The high quartiles for each factor are shown as horizontal-striped bars and the low quartiles are shown as vertical-striped bars.

This paper uses t-tests to analyze the differences among the average of purchase intentions for the brands surveyed in the high- and low-quartiles shown in **Figure 1** and verifies the validity of the hypotheses by confirming significant differences between them. As in Fujiwara and Nagasawa [1], the three luxury food and car brands surveyed are GODIVA, TORAYA and DOM PERIGNON and FERRARI, ROLLS-ROYCE and PORSCHE, respectively. Since these three food brands are mostly used for gifts as indicated in the survey conducted by Fujiwara and Nagasawa [1], the questionnaire survey asked about purchase intentions on the assumption that they were used for gifts. The questions were also to be answered on a scale of 1 (I strongly disagree) to 7 (I strongly agree).

3.2. Hypotheses

With respect to the Big Five personality traits, many studies have been accumulated in the field of psychology in various countries of the world. Based on knowledge of the characteristics of personality trait dimensions that has been obtained up to now, this paper builds hypotheses by surmising their effects on purchase intentions for the brands surveyed.

3.2.1. Hypotheses on the Effect of Extraversion

Murakami and Murakami [3] cite being shy and poor at socializing as examples of personality traits of those with a low dimension of Extraversion. On the other hand, they mention liking to socialize as an example of a personality trait of those with a high dimension of Extraversion. From this information, the factors of personality traits that are considered to affect purchase intentions for the six brands surveyed cannot be identified. Thus, the following hypotheses should hold true.

Hypothesis 1: Extraversion does not influence purchase intentions for the three food brands surveyed.
Hypothesis 2: Extraversion does not influence purchase intentions for the three car brands surveyed.

3.2.2. Hypotheses on the Effect of Agreeableness

Murakami and Murakami [3] cite being selfish and stubborn as examples of personality traits of those with a low dimension of Agreeableness. On the other hand, they mention being kind and honest as examples of personality traits of those with a high dimension of Agreeableness. From this information, the factors of personality traits

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[7]To ensure that the percentages do not necessarily end up being exactly 25%, the totals were divided so the percentages would be rounded to the nearest figures.
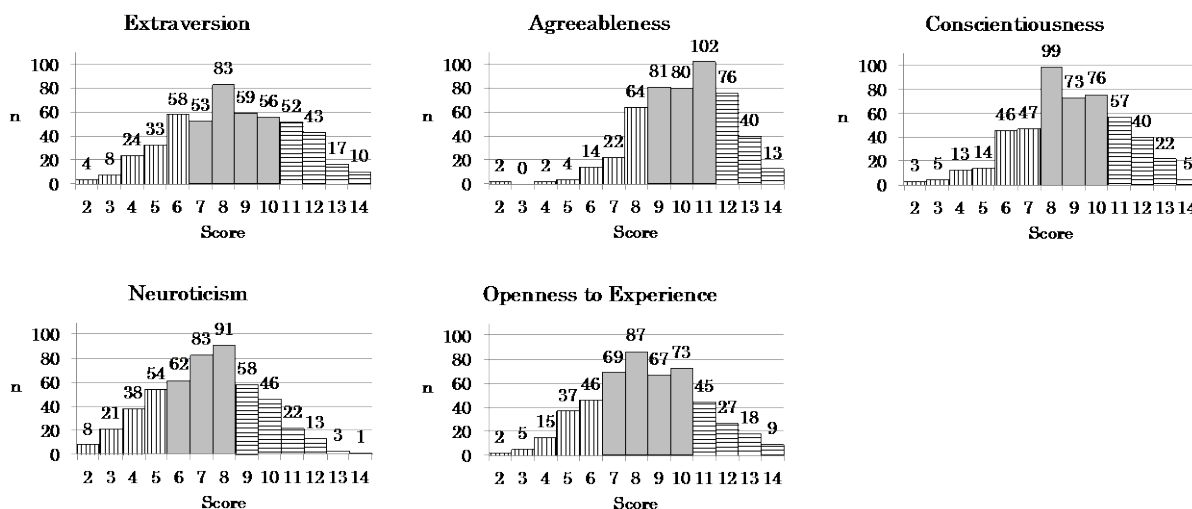
Figure 1. Psychological factors which influence the preference for luxury brands among Japanese people.

that are considered to affect purchase intentions for the six brands surveyed cannot be identified. Thus, the following hypotheses should hold true.

Hypothesis 3: Agreeableness does not influence purchase intentions for the three food brands surveyed.

Hypothesis 4: Agreeableness does not influence purchase intentions for the three car brands surveyed.

3.2.3. Hypotheses on the Effect of Conscientiousness

Murakami and Murakami [3] cite being lazy and careless about money as examples of personality traits of those with a low dimension of Conscientiousness. On the other hand, they mention being energetic toward everything and methodical as examples of personality traits of those with a high dimension of Conscientiousness. It can be inferred that carelessness about money as pointed out above leads to high purchase intentions for both luxury food and car brands. Thus, the following hypotheses should hold true.

Hypothesis 5: The low quartile of Conscientiousness shows higher purchase intentions for the three food brands surveyed than the high quartile.

Hypothesis 6: The low quartile of Conscientiousness shows higher purchase intentions for the three car brands surveyed than the high quartile.

3.2.4. Hypotheses on the Effect of Neuroticism

Murakami and Murakami [3] cite being mild-tempered and rational as examples of personality traits of those with a low dimension of Neuroticism. On the other hand, they mention being emotionally unstable and always irritated as examples of personality traits of those with a high dimension of Neuroticism. From this information, the factors of personality traits that are considered to affect purchase intentions cannot be identified. Thus, the following hypotheses should hold true.

Hypothesis 7: Neuroticism does not influence purchase intentions for the three food brands surveyed.

Hypothesis 8: Neuroticism does not influence purchase intentions for the three car brands surveyed.

3.2.5. Hypotheses on the Effect of Openness to Experience

Murakami and Murakami [3] cite being poor at thinking and lacking in imagination as examples of personality traits of those with a low dimension of Openness to Experience. On the other hand, they mention being intelligent and highly devoted to art as examples of personality traits of those with a high dimension of Openness to Experience. It can be inferred that devotion to art as pointed out above affects purchase intentions for luxury brands. The reason for this is that many luxury brands work out a strategy to ensure that they are perceived as works of art. Kapfere [7], indicating that art is strikingly pervasive in the field of luxury goods, presents examples in which Louis Vuitton makes the most of artists like Stephen Sprouse and Takashi Murakami. It can also be confirmed that the three food brands surveyed by this study produce artistic effects in areas such as the atmosphere of stores, product displays at stores, and product packaging. Similarly, with the three car brands, the

unique beauty of the body's form created by original shapes could be considered as artistic. Thus, the following hypotheses should hold true.

Hypothesis 9: The high quartile of Openness to Experience shows higher purchase intentions for the three food brands surveyed than the low quartile.

Hypothesis 10: The high quartile of Openness to Experience shows higher purchase intentions for the three car brands surveyed than the low quartile.

4. Hypothesis Tests

4.1. Observations on the Effect of Extraversion

The results of purchase intentions t-tests for the six brands surveyed in the high and low quartiles of the Extraversion dimension are shown in **Table 2**. Significant differences were not confirmed between the two quartiles, suggesting as hypothesized that this dimension does not affect purchase intentions. Therefore, the results supported Hypothesis 1·2.

4.2. Observations on the Effect of Agreeableness

The results of purchase intention t-tests for the six brands surveyed in the high and low quartiles of the Agreeableness dimension are shown in **Table 3**. Significant differences were not confirmed between the two quartiles, suggesting as hypothesized that this dimension does not affect purchase intentions. Therefore, the results supported Hypothesis 3·4.

Table 2. Purchase intention for luxury brands (t-test: high and low quartiles for extraversion).

Category	Survey Subjects	Extraversion				t
		Low Quartiles (n = 127)		High Quartiles (n = 122)		
		Mean	SD	Mean	SD	
Food	GODIVA	5.01	1.461	5.25	1.370	−1.370
	TORAYA	4.98	1.434	5.16	1.313	−1.075
	DOM PERIGNON	3.94	1.765	4.31	1.796	−1.624
Car	FERRARI	2.40	1.932	2.77	2.173	−1.413
	ROLLS-ROYCE	2.22	1.808	2.31	1.881	−0.389
	PORSCHE	2.77	2.044	3.15	2.369	−1.338

Note: Significance Level $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Table 3. Purchase intention for luxury brands (t-test: high and low quartiles for agreeableness).

Category	Survey Subjects	Agreeableness				t
		Low Quartiles (n = 108)		High Quartiles (n = 129)		
		Mean	SD	Mean	SD	
Food	GODIVA	5.15	1.084	5.11	1.607	0.225
	TORAYA	5.05	1.271	4.98	1.576	0.334
	DOM PERIGNON	4.15	1.707	4.24	1.767	−0.406
Car	FERRARI	2.56	1.920	2.35	1.923	0.862
	ROLLS-ROYCE	2.10	1.617	2.02	1.586	0.414
	PORSCHE	2.69	1.970	2.60	2.104	0.302

Note: Significance Level $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

4.3. Observations on the Effect of Conscientiousness

The results of purchase intention t-tests for the six brands surveyed in the high and low quartiles of the Conscientiousness dimension are shown in Table 4. Significant differences were not confirmed between the two quartiles, suggesting against the hypothesis that this dimension does not affect purchase intentions. Therefore, the results did not support Hypothesis 5·6.

The hypothesis assumed that carelessness about money, a personality trait of the low quartile of Conscientiousness, has positive effects on purchase intentions for luxury brands. The reason this hypothesis was not supported is that carelessness can be interpreted as having negative effects on the psychology of finding value in the nobleness of luxury goods. Carelessness about money may have positive effects on purchase intentions for other goods (luxuries such as alcoholic drinks and cigarettes) that allow people to easily enjoy pleasure, though this study does not clarify such effects.

4.4. Observations on the Effect of Neuroticism

The results of purchase intention t-tests for the six brands surveyed in the high and low quartiles of the Neuroticism dimension are shown in Table 5. Against the hypothesis, only for FERRARI and PORSCHE, the low quartile show significantly higher purchase intentions than the high quartile. Therefore, the results supported Hypothesis 7 and supported Hypothesis 8 partially.

In other words, FERRARI and PORSCHE are not supported by those with a high dimension of Neuroticism. The automobiles of these brands have flaws which are characteristic of luxury cars (Kapferer [8]). Examples of such flaws are the shrill engine sounds and vibrations coming from the driver's seat. As described above, these flaws, which are at the opposite end of the spectrum from comfort, are unacceptable to those with a high dimension of Neuroticism who are emotionally unstable and always irritated. They can be interpreted as having negative

Table 4. Purchase intention for luxury brands (t-test: high and low quartiles for conscientiousness).

Category	Survey Subjects	Conscientiousness				t
		Low Quartiles (n = 128)		High Quartiles (n = 124)		
		Mean	SD	Mean	SD	
Food	GODIVA	5.12	1.320	5.24	1.433	−0.719
	TORAYA	5.04	1.307	5.20	1.391	−0.956
	DOM PERIGNON	4.35	1.668	4.15	1.860	0.928
Car	FERRARI	2.59	2.131	2.65	2.073	−0.194
	ROLLS-ROYCE	2.14	1.760	2.12	1.641	0.092
	PORSCHE	2.74	2.174	2.94	2.178	−0.705

Note: Significance Level $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Table 5. Purchase intention for luxury brands (t-test: high and low quartiles for neuroticism).

Category	Survey Subjects	Neuroticism				t
		Low Quartiles (n = 121)		High Quartiles (n = 143)		
		Mean	SD	Mean	SD	
Food	GODIVA	5.21	1.374	5.20	1.287	0.074
	TORAYA	5.04	1.356	5.12	1.297	−0.474
	DOM PERIGNON	4.12	1.885	4.16	1.673	−0.204
Car	FERRARI	2.73	2.106	2.20	1.825	2.142*
	ROLLS-ROYCE	2.23	1.769	1.95	1.544	1.359
	PORSCHE	3.11	2.183	2.41	1.940	2.711**

Note: Significance Level $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

effects on purchase intentions.

4.5. Observations on the Openness to Experience

The results of purchase intention t-tests for the six brands surveyed in the high and low quartiles of the Openness to Experience dimension are shown in **Table 6**. Against the hypothesis, significant differences were not confirmed for GODIVA and TORAYA. Therefore, the results supported Hypothesis 9 partially and supported Hypothesis 10.

Among the three food brands, DOM PERIGNON saw the high quartile of the Openness to Experience dimension show significantly higher purchase intentions than the low quartile as hypothesized. With respect to GODIVA and TORAYA, however, the high quartile of the Openness to Experience dimension shows higher purchase intentions, but significant differences were not shown against the hypothesis. This result can be interpreted as meaning that the artistic nature of GODIVA and TORAYA is not fully recognized by consumers.

As for the three car brands, as hypothesized, the high quartile of the Openness to Experience dimension shows significantly higher purchase intentions than the low quartile. This can be interpreted as meaning that these brands fully emphasize their artistic nature among consumers who are highly devoted to art, thereby succeeding in developing purchase intentions among them.

This result demonstrates the relationship between the development of purchase intentions for luxury brands and their artistic nature through empirical analysis.

4.6. Analyses of Results

Table 7 summarizes the results of verification of the hypotheses validity. **Table 8** summarizes the results of **Tables 2-6**. In particular, the substantial effects of the Openness to Experience dimension can be confirmed in **Table 8**. Based on these results, the next chapter describes the conclusion of this study.

5. Discussion and Conclusions

This study verifies the effects of the dimensions of five personality traits classified using the Big Five personality traits on purchase intentions for luxury food and car brands through empirical analysis. The knowledge described below was obtained through this study.

1) Effects of the Neuroticism dimension on purchase intentions

The high quartile of Neuroticism, one dimension of the personality traits (emotionally unstable), shows significantly lower purchase intentions for FERRARI and PORSCHE than the low quartile. It can be inferred that the reason for this is that the flaws' characteristics of these luxury car brands (such as engine sounds and vibrations coming from the seat) are unacceptable to those in this personality trait group, having negative effects on their purchase intentions for the brands.

2) Effects of the Openness to Experience dimension on purchase intentions

The high quartile of Openness to Experience, one dimension of the personality traits (highly devoted to art),

Table 6. Purchase intention for luxury brands (t-test: high and low quartiles for openness to experience).

Category	Survey Subjects	Openness to Experience				t
		Low Quartiles (n = 105)		High Quartiles (n = 99)		
		Mean	SD	Mean	SD	
Food	GODIVA	5.23	1.058	5.30	1.374	−0.432
	TORAYA	5.18	1.191	5.24	1.302	−0.352
	DOM PERIGNON	3.83	1.678	4.48	1.837	−2.666**
Car	FERRARI	2.16	1.861	3.22	2.345	−3.563***
	ROLLS-ROYCE	1.88	1.567	2.63	2.008	−2.962**
	PORSCHE	2.30	1.947	3.53	2.388	−3.987***

Note: Significance Level *p < 0.05, **p < 0.01, ***p < 0.001.

Table 7. Results of hypothesis tests.

Big Five Factors		Hypothesis	Verification Results
Extraversion	H1	Extraversion does not influence purchase intentions for the three food brands surveyed.	Supports hypothesis
	H2	Extraversion does not influence purchase intentions for the three car brands surveyed.	Supports hypothesis
Agreeableness	H3	Agreeableness does not influence purchase intentions for the three food brands surveyed.	Supports hypothesis
	H4	Agreeableness does not influence purchase intentions for the three car brands surveyed.	Supports hypothesis
Conscientiousness	H5	The low quartile of Conscientiousness shows higher purchase intentions for the three food brands surveyed than the high quartile.	Does not support hypothesis
	H6	The low quartile of Conscientiousness shows higher purchase intentions for the three car brands surveyed than the high quartile.	Does not support hypothesis
Neuroticism	H7	Neuroticism does not influence purchase intentions for the three food brands surveyed.	Supports hypothesis
	H8	Neuroticism does not influence purchase intentions for the three car brands surveyed.	Partially supports hypothesis
Openness to Experience	H9	The high quartile of Openness to Experience shows higher purchase intentions for the three food brands surveyed than the low quartile.	Partially supports hypothesis
	H10	The high quartile of Openness to Experience shows higher purchase intentions for the three car brands surveyed than the low quartile.	Supports hypothesis

Table 8. Average of purchase intentions for the six brands surveyed in each personality trait group.

		Food			Car		
		GODIVA	TORAYA	DOM PERIGNON	FERRARI	ROLLS ROYCE	PORSCHE
All (no classification by personality traits)		5.14	5.07	4.11	2.49	2.11	2.75
Extraversion	Low quartiles	**5.01L**	**4.98L**	3.94	2.40	2.22	2.77
	High quartiles	5.25	5.16	4.31	2.77	2.31	3.15
Agreeableness	Low quartiles	5.15	5.05	4.15	2.56	2.10	2.69
	High quartiles	5.11	4.98	4.24	2.35	2.02	2.60
Conscientiousness	Low quartiles	5.12	5.04	4.35	2.59	2.14	2.74
	High quartiles	5.24	5.20	4.15	2.65	2.12	2.94
Neuroticism	Low quartiles	5.21	5.04	4.12	**2.73**[*]	2.23	**3.11**[**]
	High quartiles	5.20	5.12	4.16	2.20	1.95	2.41
Openness to Experience	Low quartiles	5.23	5.18	**3.83L**	**2.16L**	**1.88L**	**2.30L**
	High quartiles	**5.30H**	**5.24H**	**4.48H**[**]	**3.22H**[***]	**2.63H**[**]	**3.53H**[***]

Note: "L" and "H" have been added to the minimum and maximum values, respectively, among the ten groups for each brand. In addition, for personality traits that have significant differences between the average of the low and high quartiles, asterisks are added to any significantly high values according to the following standard: Significance Level [*]$p < 0.05$, [**]$p < 0.01$, and [***]$p < 0.001$.

shows significantly higher purchase intentions for DOM PERIGNON, FERRARI, ROLLS-ROYCE and PORSCHE than the low quartile. It can be surmised that the artistic nature of these brands is favourably evaluated by consumers who are highly devoted to art, succeeding in developing purchase intentions among them.

As shown in **Table 8**, the high quartile of Openness to Experience shows the highest average of purchase intentions for all brands surveyed. It is pointed out that this dimension of personal traits is closely related to devotion to art, suggesting that Openness to Experience is a particularly important dimension when considering purchase intentions for luxury brands.

As far as the author knows, this study is the first paper that demonstrates the relationships between the artistic nature of luxury brands and purchase intentions for them through empirical analysis. This should be favorably evaluated as a contribution to studies in this field. On the other hand, this study does not clarify issues such as what methods luxury brands should use to emphasize their artistic nature and what aspects of their artistic nature are favorably evaluated by consumers. These issues need to be addressed in future studies.

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