

The Impact of the Qualities of Anime Culture on the Entertainment Consumer in Romania

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Abstract In the context of globalization, Romania has assimilated many foreign cultural influences. One of these is the influence of the culture based on Japanese animation, called the anime culture that led to the opening of a market for the products of this culture in Romania. In the present study, we intend to analyze the influences of qualities attributed to this culture and anime products upon the purchase decision, both among young people and other segments of the population. For this purpose, we will use the results of previous research, which we intend to analyze from a new perspective, using specific indicators. The purpose of this study is to highlight the educational impact of the anime on the audience of any age, but especially on young people in Romania.

Index Terms: anime, consumer decision, culture, e-marketing

I. INTRODUCTION

The anime culture market is a relatively new market in Romania. This market is promoted by cultural conventions with a specific anime thematic and in the online environment. Also, specific products of this culture have recently started appearing in bookstores. Due to the fact that in Romania, the online environment plays a major role in promoting this culture and its products, we conducted surveys within facebook groups, focusing on anime and entertainment, the results of which we used to research the anime culture market under various aspects. Drawing from the researches already carried out, in the present study we propose a different perspective of approach, having as object the impact of the characteristics of the anime on the entertainment consumer in Romania.

II. LITERATURE REVIEW AND HYPOTHESIS

A. Literature Review

At the international level, studies of academic invoice have been carried out, of which we can mention: "Transcultural creativity in anime: Hybrid identities in the production, distribution, texts and fandom of Japanese anime" (Denison, 2010), "Animation, Globalization, and Cultural Identity With Special Reference to American and Japanese Media Culture" (Harris, 2013), "Fandom unbound: Otaku culture in a connected world" (Ito, Okabe, Tsuj, 2012), "Interrogations and games towards virtual-reality: Cao Fei's video narratives" (Jiang, 2018), "The cultural dynamic of doujinshi and cosplay Local anime fandom in Japan, USA and Europe, Participations" (Lamerichs, 2013), "Japanese visual culture: explorations in the world of manga and anime" (MacWilliams Wheeler, 2008). Also, statistical analyzes of trade with these products outside Japan (JETRO) were performed. In Romania, due to the appearance of the market for these products, the analysis from the economic but also

cultural perspective, of the impact on the Romanian consumer was imposed. This fact was achieved by the author, for the first time, in a series of articles, studies and academic presentations[1][2][3][4].

B. Hypothesis

Hypothesis H_1 , whose verification represents the objective of the present study, consists in the assumption of the *interdependencies and positive associations* between the attributed adjectives for anime, which, in summary, highlights some "keywords", defining for the adults culture consumers opinion in Romania, vis-à-vis of the specific anime products. Similar researches selected from the varied qualities attributed to the anime products by the participants to the online author surveys, the most significant like: *marvelous, surprising, artistic, superior, dramatic*, etc. The previews carried on studies[4][12][13] highlighted some interactions which have important influence on the consumer decision. The subjects were of different ages and choosed all the qualities they wanted from a long list of adjectives.

This time, we shall study only the adult segment of the respondents[13], using a different approach that in the similar and previous one, the preset goal being to verify and complete the picture of the cultural adult consumer view over the anime products.

III. METHODS AND INTERACTIONS ANALYSIS

A. Female segment of respondents

Table 1: The interactions between $X=$ „surprising” and $Y=$ „dramatic” attributes, in the female segment

i	A	B(Y ₁)	C(Y ₁)	F
	VALUES	OBSERVED	ESPECTED	TOTAL(T)
		NOT DRAMATIC	NOT DRAMATIC	$F_i = B_i + D_i$ $i=1,2$
1	X ₁₁ =NOT SURPRISING	y ₁₁ =24	B ³ *G ₁ =17,38	F ₁ =31 (=B ₁ +D ₁)
2	X ₁₂ =SURPRISING	y ₁₂ =13	B ³ *G ₂ =19,62	F ₂ =35 (=B ₂ +D ₂)
3		Y ₁ =37	Total: T= F ₁ +F ₂ =B ₃ +D ₃ =66	
i		D(Y ₂)	E (Y ₂)	G _i (%)
	VALUES	OBSERVED	ESPECTED	F_i/T $i=1,2$
		DRAMATIC	DRAMATIC	
1	X ₂₁ =NOT SURPRISING	y ₂₁ =7	D ³ *G ₁ =13,62	F ₁ /T= 46,97%
2	X ₂₂ =SURPRISING	y ₂₂ =22	D ³ *G ₂ =15,38	F ₂ /T= 53,03%
3		Y ₂ =29	Total observed percentage= 100%	

Source: author's research

In order to complete this hypothesis, a set of items which was analysed and presented in the previous author's studies (Mihaita, Cazacu, IBIMA, 2019), are reconsidered in the context of a new statistical approach. This new approach

refers to the calculation of some significant coefficients for the homogeneity and the independence (CHI-Square) of the factors involved, respectively the degree of association (Phi) of the studied variables. The variables percentages results from the author's researches[3] regarding the qualities of the anime and their derived products, offered by the Romanian audience. In this present study we will mainly refer to the **adult segments**, mainly aiming to verify the previous conclusions, where, for similar results, the informational statistics formulas and methods have been used.

Taking account of the Table 1 above, we agree to use the formulas for CHI-Square and Phi coefficients as it follows (we note X_i = the content of the cell placed at the column X and line i meeting)

$$\chi^2 = \text{POWER}(B_1 - C_1; 2) / C_1 + \text{POWER}(B_2 - C_2; 2) / C_2 + \text{POWER}(D_1 - E_1; 2) / E_1 + \text{POWER}(D_2 - E_2; 2) / E_2 \quad (1)$$

Phi: $\text{SQRT}(\chi^2/n)$, where $n = T = \text{TOTAL}$ number of the respondents who choosed the involved adjectives

The calculation formula for CHI-Square can also be presented in a more general form (also with the notations in Table 1), but from the variables point of view:

$$\frac{(Y_{11} - Y_{11} * X_1 / T)^2}{Y_{11} * X_1 / T} + \frac{(Y_{12} - Y_{12} * X_2 / T)^2}{Y_{12} * X_2 / T} + \frac{(Y_{21} - Y_{21} * X_1 / T)^2}{Y_{21} * X_1 / T} + \frac{(Y_{22} - Y_{22} * X_2 / T)^2}{Y_{22} * X_2 / T} \quad (1')$$

where: $X_1 = X_{11} + X_{21}$ și $X_2 = X_{12} + X_{22}$, or, in a mathematical, synthetical form, which we propose:

$$\chi^2 = \sum_{i=1}^2 \sum_{j=1}^2 \left(\frac{y_{ij} - y_{ij} \cdot \frac{\sum_{k=1}^2 x_{kj}}{T_{..}}}{\frac{\sum_{k=1}^2 x_{kj}}{T_{..}}} \right)^2; \quad T = \sum_{i=1}^2 \sum_{k=1}^2 x_{ki} = \sum_{i=1}^2 \sum_{k=1}^2 y_{ik} \quad (2)$$

For the margin of the error, respectively for the accuracy level, we have presumed the values: $e \leq 0,001$ and $99,9\%$. The degrees of freedom are calculated as follows: $df = (\text{no. of columns} - 1) * (\text{no. of lines} - 1) = (2 - 1) * (2 - 1) = 1$, so the tabulated value for the CHI-Square coefficient is, in this case, equal to **10,83**.

In the female segment of the respondents it has been choosed to taste the interaction between, the $X = \text{„surprising”}$ and $Y = \text{„dramatic”}$ qualities for the anime products, that is the respons percentages, the calculated CHI-Square value being: χ^2 (calculated) $\approx 10,83 = 10,83$ (tabulated) which proves the interdependence of the two associated variables. The calculated PHI coefficient value is, in this case: $\varphi = 0,405 \in (0,3; 0,7)$, which leads to an average positive association level for the studied variables, suggesting *surprising*, so the females are mainly impressed by this characteristic which seems to determine the *dramatic* quality of the anime products in their opinion, and, as consequence, is a **reason to buy** them.

Table 2: CHI-Square analysis for the female segment of respondents

VALUES	OBSERVED	ESPECTED	OBSERVED	ESPECTED	TOTAL	PERCENTAGE
	NOT DRAMATIC	NOT DRAMATIC (%)	DRAMATIC	DRAMATIC (%)		
NOT Surprising	24	17,38	7	13,62	31	0,47
Surprising	13	19,62	22	15,38	35	0,530
TOTAL	37		29		66	1
CHI-SQUARE=		10,82623 \approx 10,83		> 10,83 (TABULATED)	$\varphi =$	0,405

B. Male non- buyers segment of respondents

For the male non-buyers segment, CHI-Square coefficient is: $\chi^2 = 10,9$ (calculated) $> 10,83$ (tabulated) which shows the connection between other two variables: $X = \text{„artistic”}$ and $Y = \text{„superior”}$, in this case, also for the precision level of: 99% and an error margin of: $e \leq 0,01$. In addition, the calculated value of the PHI coefficient is: $\varphi = 0,3838 \in (0,3; 0,7)$. As a result, the association of data is verified, suggesting the *artistic* characteristic which the males take account when buying the anime products.

Table 3: The interaction between „superior” and „artistic” attributes, in the male non-buyers segment

i	A	B(Y ₁)	C(Y ₂)	F
VALUES		OBSERVED	ESPECTED	TOTAL
		NOT SUPERIOR	NOT SUPERIOR	F _i = B _i + D _i i=1,2
1	X ₁₁ = NO ARTISTIC	y ₁₁ = 30	B ₃ + C ₁ = 23,63	F ₁ = 33 (= B ₁ + D ₁)
2	X ₁₂ = ARTISTIC	y ₁₂ = 23	B ₃ + C ₂ = 29,37	F ₂ = 41 (= B ₂ + D ₂)
3		Y ₁ = 53	Total: T = F ₁ + F ₂ = B ₃ + D ₃ = 74	
i		D(Y ₁)	E(Y ₂)	G(%)
VALUES		OBSERVED	ESPECTED	F _i /T i=1,2
		SUPERIOR	SUPERIOR	
1	X ₂₁ = NOT ARTISTIC	y ₂₁ = 3	D ₃ + C ₁ = 9,36	F ₁ /T = 4,459%
2	X ₂₂ = ARTISTIC	y ₂₂ = 18	D ₃ + C ₂ = 11,64	F ₂ /T = 55,41%
3		Y ₂ = 21	Total observed percentage = 100%	

Source: author's research

Table 4: CHI-Square analysis for the male non-buyers segment of respondents

VALUES	OBSERVED	ESPECTED	OBSERVED	ESPECTED	T	PERCENTAGE
	NOT SUPERIOR	NOT SUPERIOR (%)	SUPERIOR	SUPERIOR (%)		
NOT ARTISTIC	30	23,6351	3	9,3649	33	0,44595
ARTISTIC	23	29,3649	18	11,6351	41	0,55405
TOTAL	53		21		74	1
CHI-SQUARE=		10,90136 \approx 10,9		> 10,83 (TABULATED)	$\varphi =$	0,3838

C. Male buyers segment of respondents

Similarly, for the male buyers segment, CHI-Square is: χ^2 (calculated) $= 6,6577$, located above the allowable value **3,78** (tabulated), which shows the connection between these two attributed qualities for the anime products, or considered variables, for a precision level of 95% and a margin of error $e \leq 0,5$, usual in the social researches.

Furthermore, the PHI coefficient value, in this case, is: $\varphi = 0,246 \in (0,1; 0,3)$, which means there is a significant association of the involved data, with a majority percentage on the main diagonal (for $i = j$), suggesting *wonderful* like

being **one strong motivation for buying** the anime products, in the male segment.

segment of culture consumers in Romania, vis-à-vis of the anime products.

Table 5: The interaction between „wonderful” and „artistic” attributes in the male buyers segment

i	A	B(Y ₁)	C(Y ₁)	F
	VALUES	OBSERVED	ESPECTED	TOTAL
		NOT WONDERFUL	NOT WONDERFUL	F _i = =B _i +D _i i=1,2
1	X ₁₁ =NOT ARTISTIC	y ₁₁ =22	B ₃ * C ₁ =15,76	F ₁ =51 (=B ₁ +D ₁)
2	X ₁₂ =ARTISTIC	y ₁₂ =12	B ₃ * C ₂ =18,24	F ₂ =59 (=B ₂ +D ₂)
3		Y ₁ =34	Total:T= F ₁ +F ₂ =B ₃ +D ₃ =110	
i		D(Y ₂)	E(Y ₂)	G(%)
	VALORI	OBSERVED	ESPECTED	F _i /T i=1,2
		WONDERFUL	WONDERFUL	
1	X ₂₁ =NU ARTISTIC	y ₂₁ =29	D ₃ * C ₁ =35,24	F ₁ /T= 46,36%
2	X ₂₂ =ARTISTIC	y ₂₂ =47	D ₃ * C ₂ =40,76	F ₂ /T= 53,63%
3		Y ₂ =76	Total observed percentage = 100%	

Source: author's research

Table 6: CHi-Square analysis for the male segment of buyers

VALUES	OBSERVED	ESPECTED	OBSERVED	ESPECTED	TOTAL	PERCENTAGE
	NOT WONDERFUL	NOT WONDERFUL (%)	WONDERFUL (%)	WONDERFUL (%)		
NOT ARTISTIC	22	15,76363636	29	35,23636364	51	0,4636364
ARTISTIC	12	18,23636364	47	40,76363636	59	0,5363636
TOTAL	34		76		110	1
CHI-SQUARE=		6,657731	> 3,78(TABULATED)		φ=	0,246018

IV. CONCLUSION

The evaluation of the mentioned coefficients has determined therefore the conclusion of the existence of the interaction between the adjectives "surprising" and "dramatic", attributed to the anime, for the female segment of respondents, suggesting **surprising**, therefore their influence on the purchase decision (under the established confidence level). For the segment of non-buyer males, the motivation in the purchasing decision for the products of the anime culture was the interdependence and the association between the adjective "artistic" and "superior" respectively, suggesting **artistic**, and for the male buyers, the determination of the decision resulted in being the interaction between "artistic" and "wonderful", suggesting **wonderful**. There is of much interest the fact that two of these adjectives are also mentioned in the previous studies conclusions, like the most significant in the consumer decision. These two adjectives, as two dominant qualities of the anime, are the "surprising" and the "wonderful" characteristics, equally chosen by the respondents, no matter the biological gender or the age, as it was proved also in the previous studies(Mihaita, Cazacu,IBIMA, 2018,2019).

Hypothesis **H₁**, whose verification represented the objective of the present study, has been verified, so its contrary hypothesis **H₀** is wrong. There are significant interdependencies between the presented adjectives, positive associations which highlight some "keywords": **surprising**, **wonderful** and **artistic defining for the opinion** of the adult

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