



Application of Riso Hudson Enneagram Type Indicator to Recommend Computer Games and Game Genres to Users Using Pearson Correlation Analysis

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Abstract—Research to find the relation between users personalities basic types (that detected and determinated by Riso Hudson Indicator) and Game Genres (according to the classification of Dariusz Gottlieb from the Polish University of Technology in Warsaw.) The results(Pearson correlation) in the form of a 9-by-9 matrix showed:

1: There is a negative relation between The PeaceMaker personality, type A and expressing the user's interest in strategic category games.

2: There is a negative relation between B: Loyal basic type and strategic game genre.

3: There is a positive relation between C: The Achiever and adventure game genre.

4: There is a positive relation between G: The challenger and sports game genre.

5: There is a positive relation between G: The challenger and strategic game genre.

6: There is a positive relation between I: The enthusiast and strategic game genre.

The results of this research can be used to develop cognitive APIs, cognitive technologies, improve SEO and reasoning results

based on the personality of their users, design and supply tailored to customers, develop a map between character of users and game softwares by different types of tests (Neo, MBTI, ...).

Keywords—RHETI, GameGenre, Cognitive, PersonalityType, Gameware

I. INTRODUCTION

Even cats play an innovative game with each other's tails, which seems to have rules. While I was working on this research, while resting on the balcony, I witnessed the creatures of the complex life-playing cats playing with each other, they stood up and suddenly jumped out and hit each other on the tail.

one of the oldest games discovered in Iran is a board game belonging to the Iron Age, Nialami period, with 58 baked mud houses with dimensions of 24 by 11 cm, by Roman Grishman in Iran, Kashan, Silk Hill, Tomb 217, Cemetery B was discovered and is housed in the Louvre. [1] “Fig. 1” (Also mentioned in the Louvre's Catalog of Objects.)



Fig. 1. Sialk Board Game. (Louvre.fr)

And the other long-standing game of the current borders of Iran is s backgammon; Archaeological excavations in the burnt city have uncovered a plate with the image of a snake and two dice and sixty beads, which can be seen in “Fig. 2” and belong to 3000 BC; 100 to 200 years older than the city of Ur. [2] It is possible that the gameplay of in the current evolution of the gameplay of this game and between the role of the snake on this board and civilization. Elam's place to check the relationship and also the gameplay of this game can be similar to today's snake and ladder game. (author's opinion)



Fig. 2. Burned City(Shahr_e_Sukhteh), Sistan Board Game.

The invention of the backgammon game “Fig. 3” by Bozorgmehr, the minister of Khosrow I of Sassanids, was a political response to the sending of the game of color (chess) by the order of Divisarm (King of India) by Tacritus (Minister of Shah of India). [3]



Fig. 3. Aryanian peoples Playing Chess and Backgammon. (Baysonghor Shahnameh)

From the first attempts to use electronic machines to play, we can go to computer games. The Bertie Brain “Fig. 4” noted; A Toe Tac Tic game created by Dr. Joseph Keats for the Canadian National Fair and presented on August 25, 1950. [4]



Fig. 4. Danny Kaye(Comedian) Playing Bertie the Brain at Canadian National Exhibition in 1950. (Life magazine)

Now along this historical course of making games and a multitude of games made by mankind, in an era when the tools of the age of communication and virtual networks are used to design and build games. There are these questions: How much is the correlation between the personality of users of gamewares and different genres of games? For example: the reformer personality type (in RisoHudson classification) and Strategy genre. How to classify games?

II. METHODES

A. Choose a Personality Indicator.

First, we choose a Personality Indicator, there are MBTI, NEO, etc. then we choose RisoHudson Enneagram Type Indicator. [5]

B. Collect Data from Volunteers

We ask 144 Question from every one of 126 persons (RHETI Test) and also questions that determinate games that they like them, then detected genre of games by Google Reasoner.

$$n = \frac{Nz^2 pq}{Nd^2 + z^2 pq}$$

N=448129, d= 0.1 (Because Corona Limits)

n =96 (William cochran formule)

persons interviewed = 126 accessible in Islamshahr, Tehran, Iran.

C. Import Data

1: Importing Riso Hudson questions into Excel software

Separately for each person to calculate the score of 9 personality types.

2: Identify and insert the genre of users' favorite games by Google Reasoner and put in circles by Darucsz Gotlib Classify.

[6] (“Fig. 5”)

solely a ludic function. The so-called *serious games*, whose main goal is not entertainment, have become a new addition to the market. The player is challenged by real problems to be solved or tested, e.g. how to behave in the face of natural disasters or accidents, how to run a company or a town, learning how to operate a vehicle or a device. It is worth emphasizing that *serious games* do not make up a separate education, army and national defense, politics, marketing and advertising, business and science. The beneficiaries of using *serious games* include educational institutions, large corporations and armies. They can also function as a medium for analyzing important socio-political problems. A good example is *Stop Disasters* [7], the UN sponsored game, whose aim is to prepare towns and settlements in dif-



Fig. 5. Variety of video game genres – an attempt to classify genres and kinds (source: author's work)

Fig. 5. classification of Dominika Chadzynska and Dariusz Gottlieb from the Polish University of Technology in Warsaw.

D. Analyze Data

Enter the calculated points of the questions into the SPSS software and the game genre to analyze and calculate Pearson correlation.

III. RESULTS

There is a negative relation between The PeaceMaker personality, type A and expressing the user's interest in strategic category games. (“TABLE. 1”)

$$(r = -0.207547, n = 111.000000, p = 0.028834)$$

2: There is a negative relation between B: Loyal basic type and strategic game genre. (r = -0.308, n = 111, p = 0.01)

3: There is a positive relation between C: The Achiever and adventure game genre. (r = 0.196, n = 111, p = 0.04)

4: There is a positive relation between G: The challenger and sports game genre. (r = 0.199, n = 111, p = 0.036)

5: There is a positive relation between G: The challenger and strategic game genre. (r = 0.208, n = 111, p = 0.029)

6: There is a positive relation between I: The enthusiast and strategic game genre. (r = 0.227, n = 111, p = 0.017)

TABLE I.

BasicTypes and GameGenres	Basic Types					
	D: The Reformer		F: The Helper		C: The Achiever	
	p	r	p	r	p	r
Adventure	0.64	0.04	0.84	0.01	0.04	0.19*
Puzzle	0.25	0.11	0.14	0.13	0.74	-0.31
Sports	0.27	-0.10	0.4	0.06	0.7	0.03
Action-Adventure	0.64	-0.04	0.43	-0.07	0.98	0.002
Simulation	0.64	0.04	0.25	-0.10	0.142	0.140
Strategy	0.34	0.09	0.58	-0.53	0.06	-0.17
Educational	0.74	0.03	0.29	-0.1	0.84	0.01
R.P.G	0.51	-0.06	0.84	0.01	0.46	-0.07
None	0.57	-0.05	0.96	-0.04	0.83	-0.02



Basic Types and Game Genres	Basic Types					
	<i>H: The Sage</i>		<i>B: The Loyalist</i>		<i>I: The Enthusiast</i>	
	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>
<i>Adventure</i>	0.96	0.004	0.02	-0.35	0.19	-0.12
<i>Puzzle</i>	0.39	-0.08	0.71	-0.53	0.099	-0.15
<i>Sports</i>	0.084	-0.165	0.58	-0.1	0.113	0.151
<i>Action-Adventure</i>	0.538	0.059	0.91	0.3	0.846	0.019
<i>Simulation</i>	0.95	0.005	0.75	-0.21	0.728	-0.033
<i>Strategy</i>	0.382	0.084	0.83	-0.308**	0.017	0.227*
<i>Educational</i>	0.170	0.131	0.001	0.027	0.717	0.035
<i>R.P.G</i>	0.443	-0.074	0.777	0.02	0.398	0.081
<i>None</i>	0.89	-0.01	0.834	0.110	0.801	-0.024

Basic Types and Game Genres	Basic Types					
	<i>H: The Peace Maker</i>		<i>E: The Originalist</i>		<i>G: The Challenger</i>	
	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>
<i>R.P.G</i>	0.78	0.02	0.298	0.10	0.254	-0.109
<i>None</i>	0.268	0.106	0.982	-0.002	0.189	0.126

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Basic Types and Game Genres	Basic Types					
	<i>H: The Peace Maker</i>		<i>E: The Originalist</i>		<i>G: The Challenger</i>	
	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>
<i>Adventure</i>	0.89	-0.01	0.876	0.015	0.602	-0.05
<i>Puzzle</i>	0.46	0.06	0.596	-0.051	0.84	0.019
<i>Sports</i>	0.27	-0.10	0.533	-0.06	0.036	0.199*
<i>Action-Adventure</i>	0.788	-0.026	0.28	0.1	0.605	-0.05
<i>Simulation</i>	0.966	-0.004	0.646	0.044	0.998	0.000
<i>Strategy</i>	0.029	-0.208	0.601	0.05	0.029	0.208*
<i>Educational</i>	0.628	0.046	0.376	-0.085	0.511	-0.063