

Why People Play Pokémon: The Role of Perceived Belonging

Full Paper

Claus-Peter H. Ernst

Frankfurt University of Applied Sciences
cernst@fb3.fra-uas.de

Alexander W. Ernst

Justus-Liebig-Universität Gießen
alexander.ernst@lehramt.uni-giessen.de

Abstract

The Pokémon video game series is one of the most successful ever created. However, it is still unclear why these games in particular have become so successful while others have not. Based on the Uses and Gratifications Theory and the concept of the Need to Belong, we postulate that an individual's Perceived Belonging (i.e., the degree to which a person feels connected to and accepted by others) positively influences his/her Actual Game Use, i.e., how often he/she plays Pokémon. After surveying 2,294 German-speaking visitors of one of Germany's most popular Pokémon websites and applying a structural equation modeling approach, we confirmed that Perceived Belonging is a direct positive influence factor of Actual Game Use as well as an indirect factor through Perceived Enjoyment. Overall, our study suggests that developers should include belonging-oriented aspects into their games, such as virtual pets, to increase individuals' video game usage through their Perceived Belonging.

Keywords

Belonging, Pokémon, Uses and Gratifications Theory, Video Game Usage.

Introduction

The Pokémon games are among the most popular video games of all time (cf. VGChartz 2015). For example, with 9.27 million units sold, *Pokémon X/Y* was the most successful handheld video game of 2013 (Statista 2015). However, it is still unclear why the Pokémon games in particular are so successful while others are not.

The aim of the Pokémon video games is to become the best Pokémon trainer: Players navigate their avatar through a world inhabited with animals called Pokémon. They have to catch these animals and train them to battle the Pokémon of other trainers they meet along the way. Previous studies have shown that real pets are able to give people a sense of belonging, which is a main driver of pet ownership (McConnell et al. 2011). In this study, we draw from the *Uses and Gratifications Theory* (e.g. Ruggiero 2000) as well as the concept of the *Need to Belong* (e.g., Baumeister and Leary 1995) to postulate a similar influence of an individual's *Perceived Belonging* on *Actual Game Use*, i.e., how often he/she plays Pokémon.

After surveying 2,294 German-speaking visitors of one of Germany's most popular Pokémon websites and applying a structural equation modeling approach, we confirmed that *Perceived Belonging* is a positive influence factor of Pokémon playing. In summary, this finding suggests that video game developers should include belonging-oriented aspects into their games, such as virtual pets, in order to influence individuals' *Actual Game Use* through their *Perceived Belonging*.

The next section gives background information on the Pokémon video game series and introduces *Uses and Gratifications Theory* as well as the *Need to Belong*. Following this, we present our research model and research design. We then reveal and discuss our results before summarizing our findings, presenting their theoretical as well as practical implications, and providing an outlook on further research.

Theoretical Background

Pokémon

Nintendo has published numerous Pokémon games over the years. The main titles of the series can be played exclusively on Nintendo's handheld consoles. For example, while the first games were played on the classic *Game Boy*, the newest games can only be played on Nintendo's *3DS* family of consoles.

The goal of the main Pokémon games is always to become the best Pokémon trainer in the Pokémon world. To become the best Pokémon trainer, players have to navigate their avatar through a world inhabited with animals called Pokémon. They need to catch some of these animals to train them and to battle the Pokémon of the *Gym Leaders*. After beating all the *Gym Leaders*, players are allowed to challenge the *Elite Four* and, ultimately, the *Champion*, which is the strongest Pokémon trainer in each game. After defeating the *Champion*, the main story arc is finished. However, players can continue their journey through the Pokémon world to catch more Pokémon or to master additional challenges such as battling stronger trainers or visiting previously unreachable regions.

Overall, in order to beat the game, players strongly depend on their Pokémon team: As of January 2015, there are 719 different Pokémon that can be caught (Pokémon 2015b). Since a player can only bring up to six Pokémon into a battle and each Pokémon has its own strengths and weaknesses, players have to carefully choose which Pokémon to train and include into their team.

In addition to catching Pokémon, players can also choose to (1) trade, (2) evolve, or (3) breed them. If they choose the first option, players can trade one of their Pokémon for another player's Pokémon. This can be done either locally from device to device or over the Internet (Bulbapedia 2015e).

Second, players can evolve one of their Pokémon to the next one in its evolutionary line, meaning that it changes into another Pokémon (including name, look, strengths and weaknesses). The most common form of Pokémon evolution is *through battle* (Bulbapedia 2015b). More specifically, when a player trains his/her Pokémon in battles, they gain experience (measured through *experience points*). After reaching a specific number of *experience points*, Pokémon will grow a *level*. After reaching a specific *level*, battle-evolving Pokémon will evolve.

Another kind of evolution is called *Affectionate Evolution* (Pokémon 2015a). More specifically, some Pokémon only evolve if they are very affectionate towards their trainer (measured through *affection hearts*). In order to increase their Pokémon's affection, a player can, for example, stroke his/her Pokémon, feed them sweets, or play mini-games with them.

Pokémon evolution can also be triggered *through friendship* (Bulbapedia 2015c). More specifically, the friendship between a Pokémon trainer and a Pokémon increases through multiple circumstances including often traveling together, buying the Pokémon a massage at a masseur, giving the Pokémon vitamins or special berries, and battling together against strong trainers such as the *Gym Leaders*, the *Elite Four*, or the *Champion*. After reaching a *friendship value* of 220, friendship-evolving Pokémon will evolve.

Finally, players can also choose to breed Pokémon (Bulbapedia 2015d). More specifically, one male and one female Pokémon can have a baby, which will be the lowest Pokémon in the mother's evolutionary line.

In order to visualize the three evolution types (*through battle*, *Affectionate Evolution*, *through friendship*) as well as the breeding procedure, we will now describe two Pokémon evolution lines (Figure 1): The Pokémon *Zubat* will evolve to *Golbat*, the next Pokémon in *Zubat's* evolutionary line, after training it in multiple battles and reaching a *level* of 22. After reaching a friendship value of 220, *Golbat* will evolve to *Crobat*. When breeding with two *Golbats* or two *Crobats*, their children will be *Zubats* again, the lowest Pokémon in their evolutionary line. Another Pokémon, *Eevee*, only evolves to *Sylveon* when it reaches two *affection hearts*; breeding two *Sylveons* will result in an *Eevee* baby.

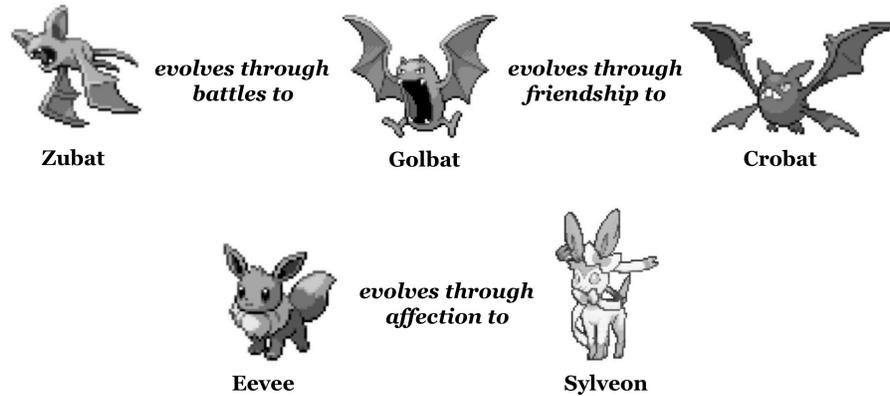


Figure 1. Two Pokémon Evolution Lines (images taken from Bulbapedia (2015a))

Uses and Gratifications Theory

The *Uses and Gratifications Theory* (U&G; Figure 2) has been used in numerous research articles and thus has acquired a prominent status in media research (Ruggiero 2000). It postulates that individuals' media usage is determined by their needs and wants with the ultimate goal of gratification (Rubin 2002).

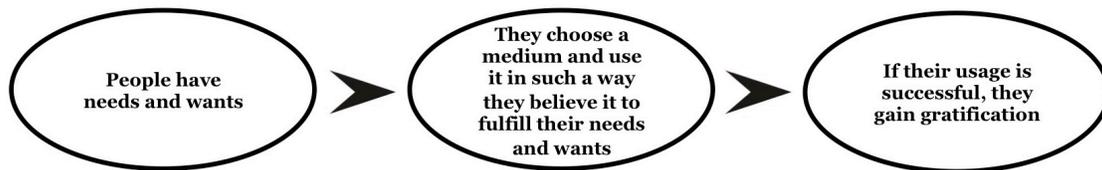


Figure 2. Uses and Gratifications Theory

More specifically, U&G assumes that people have specific needs and wants. Consequently, they are motivated to fulfill them and, hence, perform such behaviors that they believe will be able to do so. For example, imagine a curious person: U&G postulates that he/she will choose and use a medium, if he/she believes it will gratify his/her curiosity.

Various needs and wants that can drive media usage have been discussed in the U&G literature. For example, in the context of video games, it has been shown that individuals choose games that they believe gratify their specific wants such as *Arousal*, *Competition*, *Diversion*, and *Fantasy* (e.g., Sherry et al. 2006). In the following section, we will introduce the notion of human beings' *Need to Belong*. Drawing from the U&G, we will postulate later on that satisfying one's *Need to Belong*, through *Perceived Belonging*, is an important driver of how often someone plays Pokémon.

Need to Belong

In evolutionary terms, belonging to a group once provided practical benefits in terms of survival and breeding (Baumeister and Leary 1995). For example, hunting large animals for food or defending against threats was a much easier and less dangerous task to accomplish as a group of individuals than as a single isolated individual. As a result, humans developed a *Need to Belong*.

According to the concept of the *Need to Belong* (e.g., Baumeister and Leary 1995; Watson and Johnson 1972), also referred to as the *Belongingness hypothesis* (Baumeister and Leary 1995), *Need for Love*, *Affection and Belongingness* (Maslow 1943), or *Relatedness Need* (Sheldon et al. 2011), every person has, to differing extents, a fundamental need to connect to others and be accepted by them. Over time, the satisfaction of this need has become more and more positively linked to hedonic well-being, represented by the presence of positive hedonic feelings such as enjoyment, happiness, and pleasure; in addition, socially isolated people suffer more from psychological problems and illnesses than non-isolated people do (Baumeister and Leary 1995; Berkman and Syme 1978; LaVeist et al. 1997; Rook 1984). Today, people still depend on the establishment and maintenance of social relationships as potential support resources (Barrera 1986), providing them with practical benefits as well as well-being.

In summary, belonging to a group provides individuals with practical benefits as well as hedonic feelings. In line with this, it has been shown in the context of dual systems that *Perceived Belonging*, the degree to which a person feels connected to and accepted by others (Baumeister and Leary 1995; Ernst et al. 2013; Maslow 1943; Sheldon et al. 2011; Watson and Johnson 1972), is able to exert a positive influence on the *Perceived Usefulness* and *Perceived Enjoyment* of a system (Ernst et al. 2013). In turn, these two constructs are influence factors of a person's *Actual System Use* (Davis et al. 1989; Davis et al. 1992; Van der Heijden 2004), i.e., how often he/she uses a system (Straub et al. 1995).

Research Model

In the following section, we will present our research model (in Figure 3) and outline our corresponding hypotheses. First, we argue that the Pokémon video games are able to satisfy individuals' *Need to Belong*, since Pokémon are able to make people *perceive* that they *belong*. Then, we draw from the *Uses and Gratifications Theory* in order to postulate that *Perceived Belonging* has a positive influence on *Actual Game Use*, i.e., how often someone plays Pokémon (cf. Straub et al. 1995). Following this, we draw from the research on hedonic systems in order to postulate a corresponding influence of *Perceived Enjoyment* on *Actual Game Use*. Finally, we draw from the concept of the *Need to Belong* to postulate that *Perceived Belonging* also has a positive influence on *Perceived Enjoyment*.

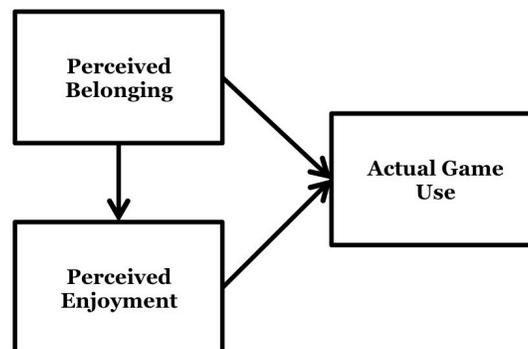


Figure 3. Research Model

It has been shown that real-life pets can provide their owners with well-being benefits (McConnell et al. 2011). More specifically, pets can be “an important source of social support”, giving people a sense of belonging, which is a driver of pet ownership (McConnell et al. 2011, p. 1240). Previous findings suggest that there might be no differences between a person's feelings towards a real pet or a virtual pet (cf. Lawson and Chesney 2007; Zasloff and Kidd 1994). For example, virtual pets were shown to be able to provide companionship just as real pets do (Lawson and Chesney 2007).

Hence, we believe that Pokémon can provide people with a sense of belonging, just as their real-life counterparts do. More specifically, in addition to the aspects of traditional virtual pets such as *Tamagotchi* or *Nintendogs* (cf. Lawson and Chesney 2007), Pokémon video games provide additional aspects that foster a sense of belonging.

Indeed, in the Pokémon games, not only does a player take care of virtual pets, he/she also teams up with them to go on an adventure. More specifically, the player chooses six out of 719 Pokémon to battle the best Pokémon trainers in the avatar's virtual world. This means that a player can put together an individual team that consists only of the Pokémon he/she likes best – a small group selected from a wide pool of Pokémon. Just like between humans, liking the counterpart is one central aspect of belonging (cf. Furman 1998).

Before a player can actually challenge the best Pokémon trainers, he/she has to train his/her Pokémon in numerous battles in order to make them strong and capable. This also means that the player spends a lot of time with his/her Pokémon, further strengthening their relationship (cf. Parker and Asher 1993).

Other factor contributing to the strong relationship between a player and his/her Pokémon are the *affection- and friendship-based evolutions*. More specifically, in order for some Pokémon to evolve, they need to have a strong *friendship* with their trainer or have a strong *affection* towards him/her,

respectively. Since both *friendship* and *affection* are dependent on the actions of the player, he/she is required to relate to his/her Pokémon in order to make his/her team stronger for battle. Moreover, after ultimately beating the *Champion*, the player and his/her Pokémon team have achieved the victory together, creating an even stronger bond between them (cf. Levesque et al. 1990).

Finally, when a player decides to breed Pokémon, it can be argued that he/she has chosen to have a virtual baby. People normally have strong and positive emotions associated with their offspring, maintaining a close and lifelong relationship with their children. A player might feel similarly towards his/her baby Pokémon that he/she brought to “life”.

In summary, we suggest that the Pokémon video games are able to make people *perceive* that they *belong*, i.e., gratify their *Need to Belong* (e.g., Baumeister and Leary 1995; Watson and Johnson 1972).

According to the *Uses and Gratifications Theory* (U&G), individuals' media usage is determined by their needs and wants, with the ultimate goal being gratification of these needs and wants (Rubin 2002). More specifically, people are motivated to fulfill their needs and, thus, perform behaviors that they believe are able to do so. In our context, *Perceived Belonging* can be described as the degree to which a person believes that the usage of Pokémon fulfills his/her *Need to Belong*. Consequently, drawing from the U&G, we believe that an individual's *Perceived Belonging* positively influences how often he/she plays Pokémon. We hypothesize that:

H1: *Perceived Belonging* positively influences *Actual Game Use*.

Furthermore, video games such as Pokémon are typical hedonic systems that “aim to provide self-fulfilling value to the user, ... [which] is a function of the degree to which the user experiences fun when using the system” (Van der Heijden 2004, p. 696). Consistently with this, numerous studies have confirmed that *Perceived Enjoyment*, “the extent to which the activity of using a specific system is perceived to be enjoyable in its own right, aside from any performance consequences resulting from system use” (Venkatesh 2000, p. 351), is an important driver of hedonic systems' *Actual System Use* (e.g., Childers et al. 2001). Applied to our context, these findings suggest that an individual's *Perceived Enjoyment* positively influences how often he/she plays Pokémon. We hypothesize that:

H2: *Perceived Enjoyment* positively influences *Actual Game Use*.

Finally, multiple studies have found that the feeling of belonging is positively linked to *hedonic well-being*, which is represented by the presence of positive hedonic feelings such as enjoyment (e.g., Baumeister and Leary 1995; Berkman and Syme 1978; LaVeist et al. 1997; Rook 1984). In line with this, Ernst et al. (2013) confirmed a positive influence of *Perceived Belonging* on *Perceived Enjoyment* in the context of *Social Network Sites*. We hypothesize that:

H3: *Perceived Belonging* positively influences *Perceived Enjoyment*.

Research Design

Data Collection

To empirically evaluate our research model, we surveyed German-speaking visitors of *bisafans.de*, one of Germany's most popular Pokémon websites. In this manner, we obtained 2,294 complete online questionnaires. 1,649 respondents were male (71.88 percent) and 645 were female (28.12 percent). The average age was 20.74 years (standard deviation: 4.76). 113 respondents were unemployed (4.9 percent), 278 were apprentices (12.1 percent), 703 were pupils (30.6 percent), 438 were in employment (20.0 percent), 638 were students (27.80 percent), and 104 selected “other” as a description of themselves (4.5 percent).

Measurement

We adapted existing and well-established reflective scales to our context in order to measure *Actual Game Use* and *Perceived Enjoyment* (Davis et al. 1989; Davis et al. 1992). For *Perceived Belonging* we adapted the prominent *Need to Belong* scale by Leary et al. (2007). For example, whereas the individual extent of people's *Need to Belong* is measured by items such as “I do not like being alone”, we measured *Perceived*

Belonging by using items such as: “When I play Pokémon, I feel less alone”. Table 1 presents the resulting reflective items with their corresponding sources. *Actual Game Use* was measured in the same manner as *Actual System Use* in Davis et al. (1989, p. 991), and all other items were measured using a seven-point Likert-type scale ranging from “strongly agree” to “strongly disagree”.

Construct	Items (Labels)	Source/adapted from
Actual Game Use	On average, how often do you play Pokémon? (AU1)	Davis et al. (1989)
	How frequently do you play Pokémon? (AU2)	
Perceived Belonging	When I play Pokémon, I feel that I belong (PB1)	Leary et al. (2007) cf. Ernst et al. (2013)
	When I play Pokémon, I feel less alone (PB2)	
	When I play Pokémon, I feel accepted (PB3)	
Perceived Enjoyment	I have fun playing Pokémon (PE1)	Davis et al. (1992)
	Playing Pokémon is pleasant (PE2)	
	I find playing Pokémon to be enjoyable (PE3)	

Table 1. Items of our Measurement Model

Results

Since our data was not distributed joint multivariate normal (cf. Hair et al. 2011), we used the Partial-Least-Squares approach via *SmartPLS 3.1.3* (Ringle et al. 2014). With 2,294 datasets, we met the suggested minimum sample size threshold of “ten times the largest number of structural paths directed at a particular latent construct in the structural model” (Hair et al. 2011, p. 144). To test for significance, we used the integrated Bootstrap routine with 5,000 samples (Hair et al. 2011).

In the following section, we will evaluate our measurement model. Indeed, we will examine the indicator reliability, construct reliability, and discriminant validity of our reflective constructs. Finally, we will present the results of our structural model.

Measurement Model

Tables 2 and 3 present the correlations between constructs together with the Average Variance Extracted (AVE) and Composite Reliability (CR), and our reflective items' factor loadings, respectively: All items loaded high (.793 or more) and significant ($p < .001$) on their parent factor and, hence, met the suggested threshold of indicator reliability of .70 (Hair et al. 2011); AVE and CR were higher than .71 and .88, respectively, meeting the suggested construct reliability thresholds of .50/.70 (Hair et al. 2009). The loadings from our reflective indicators were highest for each parent factor and the square root of the AVE of each construct was larger than the absolute value of the construct's correlations with its counterparts, thus indicating discriminant validity (Fornell and Larcker 1981; Hair et al. 2011).

	AU	PB	PE
Actual Usage (AU)	.839 (.913)		
Perceived Belonging (PB)	.299	.750 (.900)	
Perceived Enjoyment (PE)	.336	.279	.716 (.883)

Table 2. Correlations Between Constructs (AVE (CR) On The Diagonal)

Structural Model

Figure 4 presents the path coefficients of the previously hypothesized relationships as well as the R^2 s of both endogenous variables (** = $p < .001$): *Perceived Belonging* was found to have a positive influence on the *Actual Game Use* ($\beta = .222$, $p < .001$), confirming hypothesis 1. Furthermore, *Perceived Belonging* was found to have a positive influence on *Perceived Enjoyment* ($\beta = .279$, $p < .001$), which, in turn, was found to also have a positive influence on *Actual Game Use* ($\beta = .274$, $p < .001$), confirming hypotheses 3 and 2, respectively. Taking into consideration that our research model only included two and one predecessors, respectively, the explanatory power of our structural model is reasonable since explaining 15.8 percent of

the variances of *Actual Game Use* as well as 7.8 percent of the variances of *Perceived Enjoyment*. In summary, our findings indicate that *Perceived Belonging* influences *Actual Game Use* directly as well as indirectly through *Perceived Enjoyment*.

	AU	PB	PE
AU1	.888 (90.92)	.255	.227
AU2	.943 (222.61)	.289	.368
PB1	.269	.898 (146.69)	.260
PB2	.270	.825 (80.02)	.226
PB3	.235	.874 (106.34)	.238
PE1	.248	.182	.793 (44.54)
PE2	.288	.207	.874 (78.88)
PE3	.310	.302	.870 (88.29)

Table 3. Reflective Items' Loadings (T-Values)

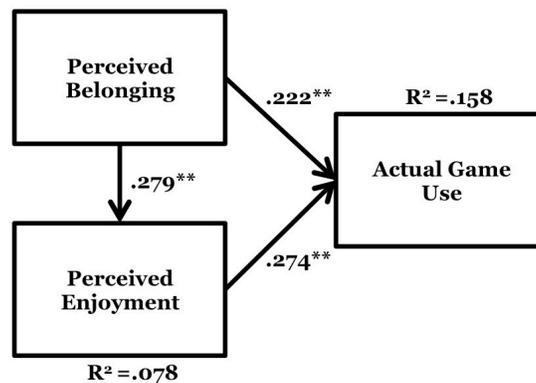


Figure 4. Findings

Conclusions

In this article, we draw from the *Uses and Gratifications Theory* as well as the concept of the *Need to Belong* to study whether an individual's *Perceived Belonging* positively influences how often he/she plays the Pokémon video games. After surveying 2,294 German-speaking visitors of one of Germany's most popular Pokémon websites and applying a structural equation modeling approach, we confirmed that *Perceived Belonging* is a direct positive influence factor of *Actual Game Use* as well as an indirect influence factor through *Perceived Enjoyment*.

Our study has some limitations. Since we only surveyed German-speaking people, our results might not hold true for people from other countries. Consequently, we plan to address this limitation by expanding our research to other countries in a subsequent study.

In summary, our article contributes to video game research by suggesting that *Perceived Belonging* is an important driver of video game playing. Additionally, our findings contribute to social theory by emphasizing that virtual pets, such as Pokémon, can provide humans with a sense of belonging, gratifying their fundamental *Need to Belong* (e.g., Baumeister and Leary 1995; Watson and Johnson 1972). Also, our findings hold important practical implications. More specifically, our study suggests that video game developers should include belonging-oriented aspects into their games, such as virtual pets, in order to increase individuals' video game usage through their *Perceived Belonging*.

References

- Barrera, M. 1986. "Distinctions between Social Support Concepts, Measures, and Models," *American Journal of Community Psychology* (14:4), pp. 413-445.
- Baumeister, R.F., and Leary, M.R. 1995. "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation," *Psychological Bulletin* (117:3), pp. 497-529.
- Berkman, L.F., and Syme, S.L. 1978. "Social Networks, Host Resistance, and Mortality: A Nine-Year Follow-up Study of Alameda County Residents," *American Journal of Epidemiology* (109:2), pp. 186-204.
- Bulbapedia 2015a. "Bulbagarden Archives." Retrieved 01-07, 2015, from http://archives.bulbagarden.net/wiki/Main_Page.
- Bulbapedia 2015b. "Evolution." Retrieved 01-10, 2015, from <http://bulbapedia.bulbagarden.net/wiki/Évolution>.
- Bulbapedia 2015c. "Friendship." Retrieved 01-07, 2015, from <http://bulbapedia.bulbagarden.net/wiki/Friendship>.
- Bulbapedia 2015d. "Pokémon Breeding." Retrieved 01-10, 2015, from http://bulbapedia.bulbagarden.net/wiki/Pokémon_breeding.
- Bulbapedia 2015e. "Trade." Retrieved 01-10, 2015, from <http://bulbapedia.bulbagarden.net/wiki/Trade>.
- Childers, T.L., Carr, C.L., Peck, J., and Carson, S. 2001. "Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior," *Journal of Retailing* (77:4), pp. 511-535.
- Davis, F.D., Bagozzi, R.P., and Warshaw, P.R. 1989. "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Management Science* (35:8), pp. 982-1003.
- Davis, F.D., Bagozzi, R.P., and Warshaw, P.R. 1992. "Extrinsic and Intrinsic Motivation to Use Computers in the Workplace," *Journal of Applied Social Psychology* (22:14), pp. 1111-1132.
- Ernst, C.-P.H., Pfeiffer, J., and Rothlauf, F. 2013. "The Influence of Perceived Belonging on Social Network Site Adoption," *AMCIS 2013 Proceedings*.
- Fornell, C., and Larcker, D.F. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.
- Furman, W. 1998. "The Measurement of Friendship Perceptions: Conceptual and Methodological Issues," in *The Company They Keep: Friendship in Childhood and Adolescence.*, W. Bukowski, A. Newcomb and W. Hartup (eds.). New York, NY: Cambridge University Press, pp. 41-65.
- Hair, J.F., Black, W.C., Babin, B.J., and Anderson, R.E. 2009. *Multivariate Data Analysis*, 7th ed. Upper Saddle River, NJ: Prentice Hall.
- Hair, J.F., Ringle, C.M., and Sarstedt, M. 2011. "Pls-Sem: Indeed a Silver Bullet," *Journal of Marketing Theory and Practice* (19:2), pp. 139-151.
- LaVeist, T.A., Sellers, R.M., Elliot Brown, K.A., and Nickerson, K.J. 1997. "Extreme Social Isolation, Use of Community-Based Senior Support Services, and Mortality among African American Elderly Women," *American Journal of Community Psychology* (25:5), pp. 721-732.
- Lawson, S.W., and Chesney, T. 2007. "The Impact of Owner Age on Companionship with Virtual Pets," *ECIS 2007 Proceedings*, pp. 1922-1928.
- Leary, M.R., Kelly, K.M., Cottrell, C.A., and Schreindorfer, L.S. 2007. "Individual Differences in the Need to Belong: Mapping the Nomological Network." Duke University: Unpublished manuscript.
- Levesque, H., Cohen, P., and Nunes, J. 1990. "On Acting Together," *AAAI 1990 Proceedings*, pp. 94-99.
- Maslow, A.H. 1943. "A Theory of Human Motivation," *Psychological Review* (50:4), pp. 370-396.
- McConnell, A.R., Brown, C.M., Shoda, T.M., Stayton, L.E., and Martin, C.E. 2011. "Friends with Benefits: On the Positive Consequences of Pet Ownership," *Journal of Personality and Social Psychology* (101:6), pp. 1239-1252.
- Parker, J., and Asher, S. 1993. "Friendship and Friendship Quality in Middle Childhood: Links with Peer Group Acceptance and Feelings of Loneliness and Social Dissatisfaction," *Developmental Psychology* (29:4), pp. 611-621.
- Pokémon 2015a. "At Play with Pokémon-Amie!" Retrieved 01-07, 2016, from http://www.pokemon.com/en-us/whats_new/pokemon_amie.
- Pokémon 2015b. "Pokédex." Retrieved 01-07, 2015, from <http://www.pokemon.com/us/pokedex>.
- Ringle, C.M., Wende, S., and Becker, J.-M. 2014. "Smartpls 3." from <http://www.smartpls.com>.
- Rook, K.S. 1984. "The Negative Side of Social Interactions: Impact on Psychological Well-Being," *Journal of Personality and Social Psychology* (46:5), pp. 1097-1108.

- Rubin, A.M. 2002. "The Uses-and-Gratifications Perspective of Media Effects," in *Media Effects: Advances in Theory and Research*, J. Bryant and D. Zillmann (eds.). Mahwah, NJ: Lawrence Erlbaum Associates Publishers, pp. 525-548.
- Ruggiero, T.E. 2000. "Uses and Gratifications Theory in the 21st Century," *Mass Communication and Society* (3:1), pp. 3-37.
- Sheldon, K.M., Abad, N., and Hinsch, C. 2011. "A Two-Process View of Facebook Use and Relatedness Need-Satisfaction: Disconnection Drives Use, and Connection Rewards It," *Journal of Personality and Social Psychology* (100:4), pp. 766-775.
- Sherry, J., Lucas, K., Greenberg, B., and Lachlan, K. 2006. "Video Game Uses and Gratifications as Predictors of Use and Game Preference," in *Playing Computer Games: Motives, Responses, and Consequences*, P. Vorderer and J. Bryant (eds.). Mahwah, NJ: Lawrence Erlbaum, pp. 213-224.
- Statista 2015. "Global Top-Selling Console Games by Unit Sales 2013." Retrieved 01-07, 2015, from <http://www.statista.com/statistics/273335/sales-of-the-worlds-most-popular-console-games-in-2011>.
- Straub, D., Limayem, M., and Karahanna-Evaristo, E. 1995. "Measuring System Usage: Implications for Is Theory Testing," *Management Science* (41:8), pp. 1328-1342.
- Van der Heijden, H. 2004. "User Acceptance of Hedonic Information Systems," *MIS Quarterly* (28:4), pp. 695-704.
- Venkatesh, V. 2000. "Determinants of Perceived Ease of Use: Integrating Perceived Behavioral Control, Computer Anxiety and Enjoyment into the Technology Acceptance Model," *Information Systems Research* (11:4), pp. 342-365.
- VGChartz 2015. "Game Database - Global Sales (in Millions of Units) Per Game." Retrieved 01-07, 2015, from <http://www.vgchartz.com/gamedb/?name=Pokemon>.
- Watson, G.B., and Johnson, D. 1972. *Social Psychology; Issues and Insights*, 2nd ed. Philadelphia, PA: Lippincott.
- Zasloff, R.L., and Kidd, A.H. 1994. "Loneliness and Pet Ownership among Single Women," *Psychological Reports* (75:2), pp. 747-752.