Love, Lust, Courtship and Affection as Evolution in Digital Play

Lindsay Grace
American University
4400 Massachusetts Ave. NW
Washington, DC, USA
+1 (202)-885-1000
Grace@American.edu

ABSTRACT

This paper outlines two models for framing affection games as a contribution to the evolution of courtship rituals or as a matriculation through Maslow's hierarchy of needs. It then frames the design of these games through two distinct lenses. The first is a game verb based framing, focusing on the affectionate actions designed to meet game goals. The second is an interaction dynamic framing, which describes digitally contained affection (affections remaining within the game), digitally facilitated affection (affections facilitated by the game) and digitally communicated affections (affection shared through the game). Continued research into affection games offers a peek into the softer side of digital play and gendered play. Its study unearths an intersection between sociological and psychological tendencies and technology. The work provides an update to previous published work in the domain of affection games by providing new data on affection games and the case study game.

Keywords

Affection games, sociology of digital play, kissing games, hugging games, flirting games; sex games, adolescent games

INTRODUCTION

As the world of games evolves, there is an obvious space for growth among the softer elements of human interaction. While games have successfully designed, refined and iterated on the most basic verbs, such as shooting, collecting, bouncing and driving they have not had as rich a lexicon in affection. Affection games represent an evolution in games toward the complex interplay of love and expression of love. Little research has been done in affection games, particularly in digital entertainment.

Affectionate play offers several pro-social opportunities. If it is proven that violent digital games increase aggressive tendencies in players (Griffiths 1999), then affection games may be proven to foster affectionate, pro-social behaviors. Affection games may also serve as consolation for players. Such games can offer an alternate kind of vicarious release for those seeking hard to come by affection. Such games might also serve to help clinically bridge gaps for autistic players or those for which affection is not a natural action. Such games could likewise become the long-distance, tele-immersive surrogate for separated friends, family, and lovers. In short, as the world continues its trajectory

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toward more digital mediation, the affection game may be one of the many ways play evolves to meet some of our most basic human needs.

The history of game designs can be reported through a variety of lenses. While some researchers frame it through game design patterns and trends (Bjork & Holopainen 2004) or hardware evolution (Aoyama & Izushi 2003), it is perhaps most telling to frame games as they reflect the complexities of human interaction. As human computer interaction has evolved, so to have the games we play. Most notably, games have moved from the simple twitch mechanics of Pong (Atari 1972) to the complex and emotional narrative simulations of games like Heavy Rain (Quantic Dream 2010). Much in the way sociologists interpret societies through the evolution of patterns in courtship, leisure, and work it is useful to interpret digital play to see patterns of change or evolution.

In the midst of these transitions, there are a variety of gaps in the human experience. Some of these gaps are filled through additions to games while others are filled by the creation of entirely separate play experiences. It is clear that with the growth of independent games, in particular, the variety and character of digital play has blossomed into a rich and complicated assortment. Affection games mark a novel bloom, as they demonstrate segue from real world play to digital play that emerged fairly late in the history of such games.

Affection games are somewhat sibling to dating simulations, a genre of games with demonstrated popularity for Japanese male youth (Taylor 2007). Where dating simulations ask players to manage relationships, affection games focus solely on the affection. The result of successfully navigating a dating simulation may be affection, but affection is not the primary activity of a dating simulation. Likewise, unlike dating simulations, which have a history that is almost perfectly aligned with the growth of adventure games, affection games lack a clear history.

Game history demonstrates early dating simulations which are strongly gendered toward male, heteronormative behavior (Taylor 2007). Affection Games on the other hand, demonstrate a general history in female, heteronormative behavior (Grace 2014). Because digital affection games have not been widely studied there is little evidence of the genre's early history. It is clear that the games have historically been offered nearest dress up games, make-up games and related digital play (Grace 2013), implying some gendered tendencies. It is also clear that such games are the digital transcription of historical analog play catalogued during childhood-adult mimicry and curious adolescent play (Broderick 1966).

MODELS FOR THE EVOLUTION OF DIGITAL PLAY

Courtship Models and Affection Games

One approach to understanding affection games is to consider them part of the domain of research concerned with courtship. This is an area explored by both sociologists and psychologists. Courtship research has focused on the ways in which the human animal communicates interest in others, responds to that interest and propels that signaling toward a relationship, marriage or conjugal consummation. Such analysis, from previous research, serves to provide evidence of evolutions in a variety of psycho-social realities including shifts in gender dynamics, marriage practices, mating, and more. Courtship is as it is presented in the literature, a way of taking the psycho-social pulse of human interaction and evolution (Bailey 1989).

Several researchers have aimed to explain the evolution of non-digital affection as a way of describing both social-cultural norms and rituals of courtship (Bailey 1989). Others have elected to catalogue the verbal (Henningsen 2009), non verbal (Moore 2010) and the digitally mediated courtship practices (Whity 2003) of people. Despite a very active research community, particularly toward non-verbal communication and interpretation of courtship cues (e.g. flirting and signaling) very little attention is played to the games related to such activity. The most comprehensive analysis in the games perceiving such play as part of courtship, falls with Brian Sutton-Smith's work, The Kissing Games of Adolescent Youth, in the mid-twentieth century (1959). Sutton-smith catalogues and outlines a variety of games, providing a report of how these non-digital games are played.

The model for how digital affection games may evolve as part of courtship has at the very least, a robust foundation in courtship histories and study. If affection is considered part of courtship, it might then be presumed that affection games are a translation of the courtship activities from the non-digital space to the digital space. The problem is of course, that of the many games and play activities recorded in the history of courtship very few have been translated into the digital space. Popular games like Spin the Bottle do have some digital versions, but the bulk of the more than 20 distinct games listed in the literature have no digital equivalent. For example, after reviewing hundreds of affection games, there is remains no significant Turtle Climb or Choo Choo variant (i.e. games Sutton-Smith first catalogued in 1959) digital games . While many sports, like tennis have early translations in Pong (and later in the many tennis simulations notably including the physicality of Nintendo's Wii), there is no clear affection game as a non-digital to digital translation (beyond spin the bottle and truth or dare variants). At best, it might be claimed that the verbal flirting and courtship has seen its digital equivalent in sexting (Rudd 2013), which has found a fairly active community in the same demographics often analyzed by researchers in the non-digital space.

As an historical research precedent, courtship offers the most substantial corollary for interpreting affection games. There is a plethora of foundational research from multiple disciplines and there is an active community of contemporary researchers. These support the notion that courtship is an apt place from which to begin analysis of contemporary digital affection games.

It is of course, fraught with complications. Digital affection games do not seem to serve as the antecedent of marriage, mating or other such activity, even when played in virtual worlds like Second Life. A player of affection games, does not expect the result of their positive performance to end in marriage or sex for example.

However, it remains unclear if adolescents use affection games to practice non-digital affection. In previous research, for example, it was clear that reviewers of mobile affection games claimed to use the games to practice kissing through the digital before engaging in it in the non-game world (Grace 2015). Also complicating this evolution is the reality that not all affections are part of courtship. Affection games involving kissing are arguably outside of general courtship rituals, while affection games involving sex are perhaps even more so. It could be argued that performance in such games is an effort in proxy, much like the role sports play for adolescents who may use high performance to indicate alpha dominance or social network performance. By such logic, the players courtship, is supported by their demonstrated efficacy (i.e. the game indicates the player kisses well, the player is worth considering as a mate).

Framing affection games as courtship succeeds as an academic foundation for such research, but seems to fail as a practical one. Courtship research lacks the historical contextualizing of games, despite an evident relationship between attracting mates and demonstration of playfulness (Brown 2009, pages 165-167). Courtship then seems inadequate at providing a complete model of how digital play has evolved to include affection games.

Psycho-Social Models

It is worthwhile then to consider how other models might play out in relation to an evolving understanding of digital games. Drawing from developmental psychology, it has been proposed that human-computer interaction in games evolves similarly to human development in play patterns (Spangler 2014). Building on Mildred Parten's stages of play, technological play seems to move from solitary play toward cooperative play, much like human development in play modalities (Spangler 2014). Affection games could thus be understood as meeting a human developmental stage of play, offering the ability to digitally play things that might be played in the non-digital world.

It has also been proposed that game design mimics attributes of Maslow's Hierarchy of needs as depicted in figure 1. Several researchers have proposed that games are largely anchored in the base of Maslow's pyramid (Hejdenberg 2005), (Siang 2003) (Webster 2013). The dominant priorities of early arcade games, for example, are what Maslow would describe as physical needs. Historically digital game players were often tasked with meeting needs at the bottom of Maslow's hierarchy as in figure 1. These games focused on keeping the player alive, by assuring that their needs for life-sustaining resource and safety were kept (e.g. collecting food, accruing points, avoiding collisions). The focus of such games is simply staying alive. This is the fundamental characteristic of many early arcade games, whether Pac Man, Centipede, Frogger or Gauntlet. Such games, frame the world in simple to understand terms. As such, failure in these games is defined by the bottom of Maslow's pyramid.

This notion of basic survival is so pervasive that Noah Falstein, a former chief game designer at Google, suggested the game design mantra of natural funativity (Falstein 2004). In short, natural funativity is the design approach that embraces the notion that players are most compelled by experiences that are easily analogized to their own need to survive. In such a design paradigm, games about hunting and gathering or games in which one practices survival skills are most compelling to wide audiences. As Falstein articulates it, we play to practice that which matters most to us (Falstein 2004). An astute researcher might ask, how affection falls within the fundamental needs of survival. From Maslow's framing, it is the tier above core physiological and safety needs.

Affection Games, if situated on Maslow's pyramid, are the next step toward a kind of self actualization. Players have spent decades at the bottom of the pyramid, resolving physiological threats and preserving safety within game worlds. A myriad of games have ventured into the love and belonging realm, offering players activities that step beyond the base concerns of safety. These include everything from the basics of sex in games (Braithwaite 2009) to the nuances and social complexity of romance (McDonald 2015).

Moving toward contemporary games it is clear that there has been an interest in moving upward in Maslow's hierarchy. Designers of contemporary games have involved notions of love, esteem and anxiety either though narrative, or less frequently through specific mechanics. Examples include a variety of mood meters and related abstractions, as is

central to games like Indigo Prophecy or Incredible Crisis. Many of these efforts have been offered in the context of large scale commercial games.

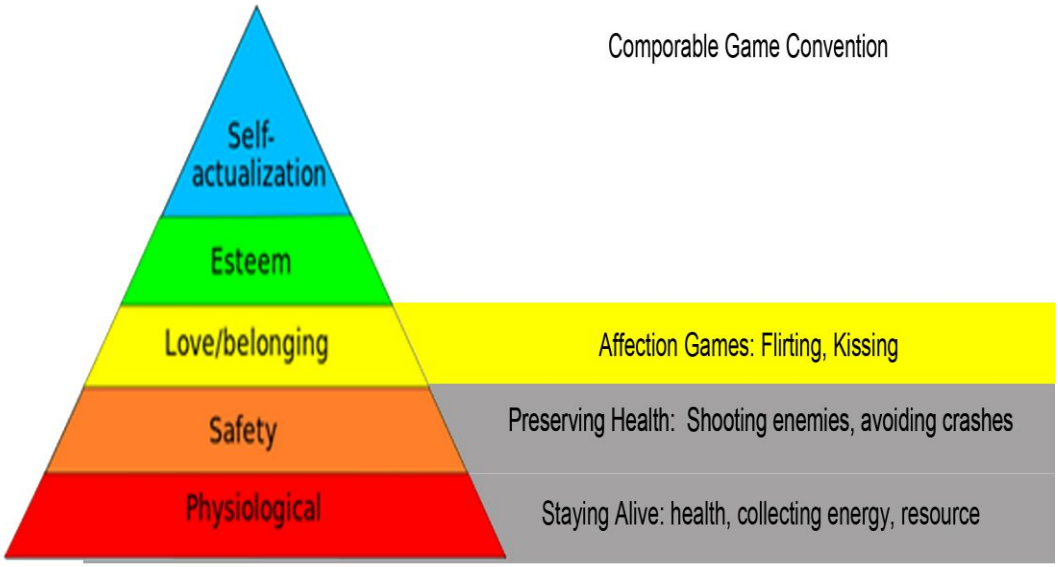

Figure 1. Maslow's hierarchy of needs compared to conventional game experiences and goals

Interestingly, another thread has developed among independent game makers. Diverging from the story driven tradition of dating simulations and other relationship simulation, this new generation of games focuses on the mechanics of love and affection. They employ the structure of arcade games, aimed at affection (instead of shooting or other twitch skills). Such games attempt to encode the complex dynamics of affection and affectionate play into simple games with equally simple mechanics. Where once games commonly asked players to practice hunting and gathering, these games ask players to practice affection and loving.

As mentioned, the genesis of such play remains unclear, but in order to begin to understand these games it seems useful to take a fundamental catalog of their designs. These affection games are a relatively new type of game design, combining some aspects of historical analog affection play with the novelties of digital interaction. From an anthropological and sociological perspective, these games are socially important for their relation to courting, gender and cultural diversity. From a technological lens, they are an opportunity to investigate how very human factors are translated into digital experiences.

This paper reports on the current state of affection games outlining the types of games offered, their growth and the potential for such games in the future. The paper also outlines the researchers' own experimental foray into the design and implementation of a distinct affection game for mobile devices. The case study game, called Stolen Kisses, was created to provide a first-hand report on the consumption of these games. It was widely distributed and solicited feedback about the experience from players.

CATEGORIZING AFFECTION GAMES: DESIGN AND INTERACTION

After more than 2 years of study, this research has yielded a fairly succinct understanding of affection games. The games can be described through 2 basic categorizations. First, by the actions enacted in the games and the ways in which players meet their in games goals. This is a *game verb* based categorization, which interprets affection games via the in-game actions. To date the most common affection verbs have been flirt, hug, kiss or make love within the game. This first framing is a design-focused interpretation of the genre.

Secondly, the games can be categorized via their interaction dynamic. Digital affection games are typically played human-to-computer or human-to-human, although it is reasonable to imagine that there will be an evolution in robotics potentially seeking computer-to-computer affection play. This dichotomy can be further dismantled to describe digitally contained affection (affections remaining with the game), digitally facilitated affection (affections facilitated by the game) and digitally communicated affections (affection shared through the game). This framing is a human-computer interaction (HCI) based interpretation of the genre.

Affection Games have generally grown in popularity (Grace 2015). The best selling affection games have recorded more than 500,000 installs in less than a year. These include Mermaid Kiss (ABC Casual Games 2004) and Kissing Test Prank (Enegon 2010), for example. This paper builds upon previously published research in affection games by providing a wider analysis of the genre, its mechanics and its distribution. It offers as evidence, the simple case study of a game to test and evaluate cultural interest in affection games.

TYPES OF AFFECTION GAMES:

Affection Games by Verbs

There are a variety of ways in which cultures express affection. For the sake of clarity and to provide an easily classifiable base from which to begin the analysis of affection games, the researcher has selected the most common affection verbs in digital play. Widely these include *taking care* of someone or something, *feeding* something or someone, *flirting*, *hugging*, *kissing* and *making love*. This list of verbs is derived from a qualitative review of more than 100 affection games (Grace 2013).

Of this set *taking care* and *feeding* are the most ambiguously affectionate. Feeding Pac Man pellets, for example, is not clearly an act of affection. It is just as likely such an act is simply meeting a basic need at the bottom of Maslow's hierarchy of needs. For this reason virtual pet games and character games are not included as affection games.

To offer clarity on the nuances of affection, the verbs *flirt*, *hug*, *kiss*, and *making love* have been chosen. It is clear that others game verbs theoretically and practically express affection. For example, when considering affection between human and animals, pet and pat are potentially candidates for such classification. Such verbs are common in the genre of virtual pet games, of which affection is a factor among a myriad of more basic needs (e.g. feed for survival).

Likewise in certain cultures, the stance of bowing or holding hands have special affectionate meaning. The research has found no widely distributed games that employ these human-human affections. Hence such verbs have not been included in the tallies.

The classification of flirt, hug, kiss and making love offers a reasonable base for examining affection games simply because they are the most commonly used verbs in the existing set of games focused on affection. It is a convenient, but distinct set. This is in part because these 4 verbs can be understood as part of a much longer tradition of anthropological study in courtship rituals popularized in the 1960s and continued through today (Sutton-Smith 1959).

To determine the game verb for affection games, each game was catalogued by description and depiction. For each tally the player's goal had to be met primarily through the use of one of the key affection game verbs (e.g. kiss, flirt, or hug). This was assessed formally by interpreting the primary or secondary game verb used to meet player goals. In analogy, a driving game is comprised of the primary verb drive which typically contains the primary/secondary game verbs steer and accelerate.

Table 1 reports on the aggregated analysis of games offered on Kongregate and Google Play. As demonstrated the overwhelming majority of catalogued affection games focus on kissing. As the table demonstrates it is also the only consistently growing affection game verb in the last two years on Google Play. It is also worth noting that the number of kissing games has actually decreased on Kongregate.

		Google Play	Kongregate
2015			
	Flirt	7	13
	Hug	2	4
	Kiss	209	264
2017			
	Flirt	12	10
	Hug	2	2
	Kiss	223	96

Table 1. Number of affection games available for play by game verb

Anecdotally it is evident that some of the similarly marketed dress up games have added the game very flirt and hug to their game activities. This is most obvious in the games offered on Google Play, where dress up game Flirt City (Candy Grill LLC 2017) offer flirting as a secondary activity after the player has dressed their character in the appropriate attire. Playful simulations like Naughty Girlfriend (Happy Mobile Games 2016) employ flirting as a secondary activity as well. These are clearly distinct from the newer flirting focused games like Flirt: A Game of Attraction (Interactive Monster) 2017, in which players primary action is to flirt.

These numbers are somewhat complicated by the publication rules and distribution networks for such games. As is common in many cultures, sexual affection games are

not widely distributed in public networks. The websites that host such content are typically listed as pornographic, while the retailers of online content explicitly restrict sexual affection from their stores. Regardless of whether or not a game contains nudity, sexual affection depictions on Google Play or Apple's iTunes App store are explicitly rejected for content. As such, it is conceivable that kissing as an affection verb is second to making love in games. However, collecting such data requires examining websites and third-party retailers with less than reliable data and a sharply varied quality of product. It also requires an exceptionally complex set of cross cultural examinations that exceed the scope of this work. There are for example, games in which players provide massages to half-naked non-player characters and games in which sexual acts are depicted with fully clothed player characters. Both can be perceived as affection, but both can also be and have been reported at medical or instructive non-sexual, non affection content.

Affection Verbs, Ambiguity and Play

Two reasons for the lack of other affection verbs can be given. First, the ambiguity of other affection verbs complicates designing a game for them. Rubbing (as in a dog's belly), for example, is an action not solely reserved for affection (e.g. one rubs an eraser, or rubs to clean). The game Hug a Pug (Bonobo 2014), is one example of a game in which a player uses another affection verb to meet in-game goals. Yet, from the developer's description the player must "try to find three spots and rub the sweet doggie as fast as you can." From a less naïve perspective, the game may infer a kind of innuendo that is less innocent.

Likewise, rubbing is not a common fantasy. A player who may have a crush on someone, can play a game that lets them imagine themselves kissing the object of their affection. Depending on the player's age and interest, the fantasy of flirting, kissing and making love is likely far more inviting than the fantasy of rubbing a dog's belly. This framing of affection and fantasy is also common to some sociological examination of affection and courtship play.

Secondly, these affection verbs have a unique relationship to human nature. Each of them acts as a signal and precursor for further affection. A flirt may precede a hug, a hug precedes a kiss with a build toward making love. This is why, such play outside of digital play has existed for as long as humans have recorded their play (Sutton-Smith 1959). Sociologists and anthropologists catalog such play in an effort to understand its development, which has been linked to adolescent development and experimentation in gender and social roles (Sutton-Smith 1959). In short, these affections are part of a larger system of signaling romantic interest.

Notably, flirting is a particularly nuanced verb in life and in games. Most of the affection games, depict something far less nuanced when playing with affection. Popular flirting games like School Girl Flirt (Girl Games Only 2013) employ a mechanic closest to shooting in conventional games. In the game, a female player-character shoot a ray of flirt at male non-player characters passing by. The ray then must be held long enough to entrance non-player characters who are lulled into following the player character and increasing the player's score. Players can also engage in competitive flirts, where two characters are engaged in a tug of war between two flirting rays. Such depiction of flirting simplifies the complex nuances of real life flirting. Yet, flirting, does stand as a common affection verb, mostly in its relationship to a general spectrum from flirting to hugging.

Affection Games by Interaction Dynamic

Affection games can also be understood via their primary interaction dynamic. To date digital affection games have offered 3 basic interaction schemes. These are digitally contained, digitally facilitated and digitally communicated.

Most affection games allow players to express affection wholly within the game world. Players manipulate in-game characters who expressed affection to other in-game characters. Such games are the most basic level of human-computer interaction, akin to the same experience demonstrated in first generation shooting or platform games. Button presses, mouse clicks, and joystick slights are used to express affection. The bulk of existing web and mobile based games exist as digitally contained affection games. These are primarily single player experiences.

The second largest group of affection game interactions are digitally facilitated games. These games provide the motivation, framing, or play basis for human-human interactions. These games structure play for two players in a directed manner, offering randomness or ideation to or more people involved in play. In short, they convert a spinning bottle from the physical to the digital. They facilitate affectionate play. They are multi-player experiences.

Games in this second group are commonly digital transcriptions of the games spin the bottle, truth or dare, I've never, sex dice and sex roulette. The game works as third party, instructing, challenging or otherwise manipulating two or more human players to express or experiment with affection. These games are more commonly distributed on mobile devices. They range from the more explicit Sex Game Roulette (Numbigames 2015) to the innuendo driven Fruit Salad (Campana Studios Inc. 2015). Several of the kissing games catalogued by Brian Sutton-Smith (1959) in the last century are now available as digital equivalents on mobile devices. There are, for example, 29 spin the bottle games currently available on Google Play.

The obvious evolution of such interactions moves toward more true-to-life interactions. Much like toy guns and simulated steering wheels became common for arcade games, there is the reasonable expectation that affection games follow the same path. These are the digitally communicated affection games. In such games, the digital software and hardware not only facilitate affection, they receive, manipulate, or communicate such affection.

Touch is the dominant interface for digitally communicated affection games. To date, there are more than 20 mobile games which require players to kiss their device screen. These range from kiss-testers which evaluate the quality of a kiss delivered to a mobile device to games in which players kiss babies, kittens, and digital characters. Other affections commonly mitigated through touch control include pet (as in rubbing a dog's stomach) and scratch (arguably affectionate when consider pet-computer interactions).

There have been a few specialized designs that orbit the world of affection play with non-touch interfaces. In affection game history, there have been a small set of digitally communicated affection interactions facilaited by specialty hardware. Most notably in this domain are the kiss controller (Nam & DiSalvo 2010) and Big Huggin (Grace 2013) and too a lesser degree Musical Embrace (Huggard et al. 2013). Kiss Controller monitors the kiss of two players to effect two on screen games. In Big Huggin, the player must hug a stuffed bear to help the bear past his on screen obstacles.

The most interesting of these is the MIT Media Lab's Huggable (Stiehl et al 2005) robotic companion. This proprietary robotic design offers the potential for a full-duplex version of the Big Huggin' game at the minimum, but clearly more if developed. Astute researchers might cite the history of teledildonics (Brown 2008) and other device mediated interactions, although the clear distinction is between affection orientation and stimulation.

FUTURE INTERACTIONS

It is easy to imagine that the future of affection games may include specialized hardware designed to provide a better simulation of affection. Such games might employ robotic arms to hug, haptic lips to kiss or robotic facial simulations as feedback for practiced flirts. In much the way that exergames have fostered an opportunity for people to re-engage with exercise, affection games could foster a re-engagement with affection, courtship practices and communication.

It is also important to note that while gestural interfaces for games have grown, the practice of designing affection games has not embraced such gestures. From more than 15 months of cataloging affection games, the researchers could not find a computer vision based gesture-driven affection game. Such a game would see few practical hurdles (e.g. hugging a virtual character or kissing the air), yet no such game has been widely published. This is particularly interesting when considered in the real-world context, where people have historically played this way (e.g. blowing kisses).

These same engagements with affection could likewise be turned from human-computer interactions, toward pet-computer interactions. The practical benefits include an important element of digitally mediated caretaking – the human element often lacking in robotic interactions. It is reasonable to imagine a future where robotic care-takers of pets, for example, play affection games with pets in a human's absence. Obviously such games would have different structure than their human-robot game equivalents.

Lastly, as such games are designed for human-human interaction, such play may resolve toward digital entities. While extraordinarily exotic and likely esoteric, there is a chance that evolving AI systems find benefit in training through play. This could take the form of adaptive affection games played between robots or digital systems.

CASE STUDY: STOLEN KISSES

Stolen Kisses is a game created to research affection games in the real world mobile environment. The game was implemented to obtain more details about who plays the game and to experiment with alternative affection games. Researching affection games is particularly troublesome. Players are not always eager to admit that they play such games. Likewise obtaining statistics from developers is difficult because many developers are independent game makers with few resources. The affection games that are made by larger companies are also held as intellectual property that developers are not eager to share (for fear of competition). As such, creating a simple affection game provides a reasonable opportunity to research affection games in the real world.

After studying the affection games genre it was clear that several characteristics plagued the space. In particular, the games demonstrated very little racial or gender diversity. Stolen Kisses was designed to test the international market for a game that offered increased racial and gender diversity. The simple game was developed and released by

the researcher on October 25, 2013. The game, as listed on Google Play in 2017 is shown in figure 2.

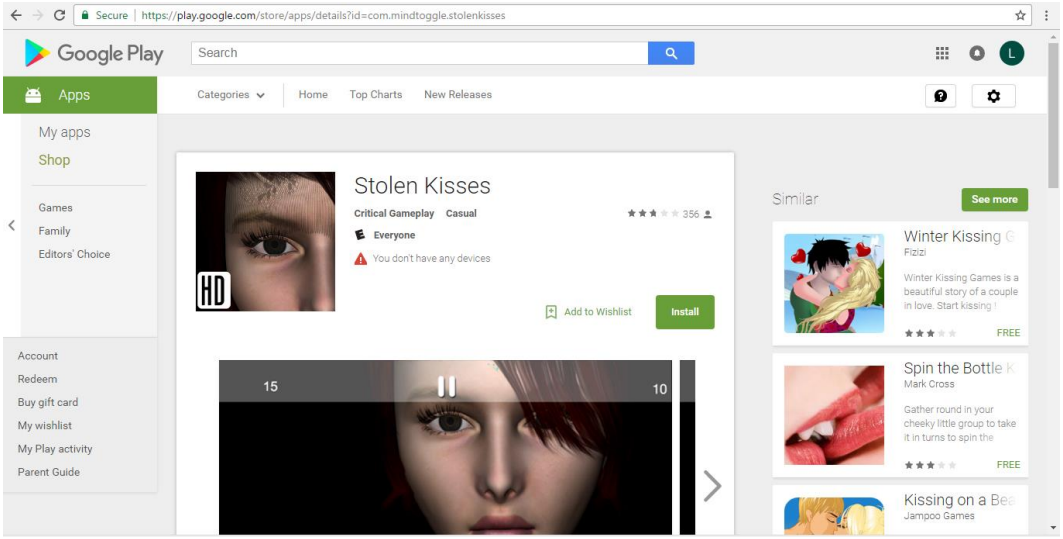

Figure 2. The Stolen Kisses Game listing on Google Play (United States Version)

Stolen Kisses is a digitally communicated affection game using the kiss verb. Players must choose one of 8 racially and gender diverse characters. The player then has 90 seconds per round to kiss the character to gain points by putting their lips to a touch screen. The player must balance their kisses between long kisses and short kisses. Kisses that are long earn more points, until they hit a dynamic too-long threshold where they lose all points accrued during that kiss. Each of the characters varies in their desire for long and short kisses. The player is rewarded for interpreting the feedback via points earned for each character.

App Annie independent app tracking was used to record activity for the game. 42,339 installs of the game were recorded between October 24, 2013 and April 24, 2017. Figure 3 demonstrates the daily installation rate for the game. As shown, the game consistently attracted an average of 50-60 installs daily. The game was most installed by players based in the United States (23% or 9809 installs), Indonesia (9.2% or 3901 installs), Turkey (4.7% or 2001 installs), the Philippines (4.3%), Russia (3.8%) and India (3.2%).

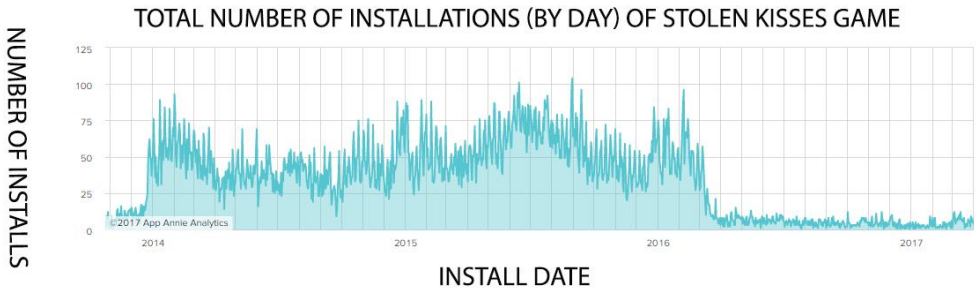

Figure 3 Number of daily installs of Stolen Kisses by visitors to the Google Play app store.

The 356 players who reviewed the game provided an average score of 3 out of 5. Online complaints largely focused on the game's mechanics, while praise focused on the experience (kissing the mobile device). The game is admittedly a fairly low quality experience, but it did serve the research goal by providing an opportunity to understand more about the players of such games with minimal development investment.

The app has never been updated since its release on October 25, 2013. Daily installations declined significantly in the middle of March, 2016. This decline is attributed to changes in app store listing requirements and updates to target Android operating systems. In short the app, with nearly 3 years of neglect, the app no longer met listing standards. By April 2016, the app continued to receive a trickle of installs, mainly by users with outdated hardware. Such decline is typical of any app under the same circumstances.

Case Study Findings

The Stolen Kisses game served as a simple experiment in affection games. Its release supported an understanding of who is playing this type of affection game around the world. The game was developed in the United States which may explain some of the majority player base. In hindsight, failing to translate the game may have also prevented wider distribution and interest in the game. It is important to note that the game was never marketed; it was simple published and left to attract interest on its own merit. Ultimately, many factors effect why people install specific games, including graphics, promotional material, title and a host of other marketing decisions. Since Stolen Kisses is very simple it seems inappropriate to infer too much from the install numbers. It seems sufficient to infer that it's mode of play is of cross-cultural interest for mobile users, with a clearly strong interest by the English speaking world.

OBSERVATIONS AND CONCLUSIONS

This paper reports on the evolving growth, distribution and design tendency of digital affection games. Affection games are games in which players must hug, flirt, kiss or make love to meet their goals. This fairly nascent game genre represents an evolution in games that may indicate a wider opportunity for diverse digital play.

Understanding affection games does not obliterate the myriad of complications digital play offers. Instead, understanding affection games may result in the growth of the fairly nascent genre and a continued understanding of the relationship between technology and socio-cultural qualities.

The novelty and value in such analysis is twofold. First, such study provides perspective on the sociological and psychological characteristics of digital play. Continued research may support prognostications for a digital mediated society. Such study serves as an opportunity for digitally-linked anthropology. It also serves as an opportunity to shape the future, by designing experiences that help players embrace pro-social perspective on affection in the many ways it is expressed. The potential for affection oriented treatment, including the clinical treatment of autistic players also seems a likely benefit.

Secondly, such research provides a more thorough understanding of the world of games and play. This is a world that continues to be relatively flatly understood. Computer entertainment is clearly more than first-persons shooters and role playing games. As the community of players continues to diversify its age, gender, and psychographics it's important to keep track of these changes. This awareness benefits not only the community of researchers, but the industry that seeks to consistently increase the number of players

engaging in its products. To date, there has not been a widely distributed, commercial success in affection games. Like other genres it still seeks its blockbuster title. Yet, a careful analysis of this space can help lead the way toward such ends.

Admittedly the genre is not as mature as its somewhat sibling dating-sim equivalent. It's demographics are likewise different as demonstrated by the player initiated installations of the Stolen Kisses case study and the distribution patterns described previously. Yet there is a commonality between both genres that may offer an opportunity for important steps in social development.

Both genres are socially linked and encode a variety of cues related to the way designers, developers and players perceive love and affection. The dichotomy of dating simulations as male play, and affection games as female play is particularly interesting. The cultural attribution, as predominantly Japanese or predominately Western, also offers important fodder for investigation.

Lastly, continued critical analysis of the encoded values is as essential as it is in understanding other entertainment mediums. Both dating sims and affection games are a reflection of human values and the voice from which some of our understanding is learned. It is hoped that these small steps in analysis and decomposition of the affection game space will aid understanding of this distinct entertainment medium.

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