

**Original Article**

**THE TEXAS BILLIONAIRE'S PREGNANT BRIDE:  
AN EVOLUTIONARY INTERPRETATION OF  
ROMANCE FICTION TITLES**

Anthony Cox  
*Centre for Psychology and Computing, Dartmouth, Canada*

Maryanne Fisher  
*Department of Psychology, St. Mary's University*

**Abstract**

In this paper, we focus on the titles of popular modern romance novels, published by Harlequin Enterprises, in order to ascertain whether these books pertain to women's sex-specific mating interests. Presumably, market demands have shaped the titles of Harlequins, such that books with titles that reflect topics of interest to women will sell the best. Two forms of analysis were undertaken to investigate whether the titles are in agreement with predictions informed by evolutionary psychology. First, we identified the most frequently occurring words to determine the most prevalent issues addressed by titles. Second, we performed a qualitative analysis to identify the most popular, recurring themes that appear in the titles. Our results indicate that Harlequin romance novel titles are congruent with women's sex-specific mating strategies, which is surmised to be the reason for their continued international success.

**Keywords:** mating strategies, romance novels, sex differences, qualitative analysis, information retrieval

Romance novels are a distinct form of fiction, in which a romantic relationship is the driving force propelling the story forward (Thomas, 2006). For the most part, the novel revolves around the heroine's emotional involvement with other characters, and most particularly with the hero. Romantic stories have a long history; the known origin dates back to Greek and medieval tales, carries through the work of Jane Austen and Margaret Mitchell's *Gone with the Wind* to today's fiction (Camp, 1997). Within mass-market paperbacks, romance novels saw a dramatic market increase in the 1970s that has persisted, mostly stemming from the onset of Harlequin Enterprises (Eike, 1986). Therefore, stories of romance have experienced a long existence and represent a

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AUTHOR NOTE: Please direct correspondence to Maryanne Fisher, Department of Psychology, St. Mary's University, 923 Robie Street, Halifax, Nova Scotia, B3H 3C3, Canada. Email: [mlfisher@smu.ca](mailto:mlfisher@smu.ca)

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noteworthy portion of the fiction market (Camp, 1997; Eike, 1986).

In 2007, romance fiction generated \$1.375 billion (USD) with approximately 8,090 titles in the United States (Romance Writers of America, 2009). It is, by far, the largest fiction category. For example, in the United States, the next largest market for a genre is religion and inspirational (\$819 million), then science fiction and fantasy (\$700 million), mystery (\$650 million), and classic literary fiction (\$466 million). However, these categories are not mutually exclusive, as inspirational romance and romantic fantasy also exist.

The romance fiction market is dominated by Harlequin Enterprises Limited, who is the world's largest publisher of romance novels (Harlequin, 2009). The company publishes approximately 120 titles a month, translated into 28 languages and sold in 114 international markets. In 2008, Harlequin sold over 130 million books, and since the company was founded 60 years ago, they have sold about 5.8 billion books. According to a recent press release (Harlequin, 2009), about 17% of mass marketed paperbacks sold in North America are published by Harlequin, and approximately one third of all North American women are thought to have read at least one. These figures clearly suggest that the appeal of Harlequin romance novels is universal, cutting across cultural and political boundaries (Linz, 1992).

Why has the romance novel experienced such success? Certainly, some of the success is due to creative marketing techniques, such as putting Harlequins in boxes of detergent (Modleski, 1980). Harlequin also developed the concept of series romance, in which the books physically look similar to each other with a numbered title as part of a brand name, becoming a "uniform, homogenized, quality controlled" commodity (Dystel, 1980, p. 22). However, the popularity must primarily be due to the way the novels captivate their market. They represent women's "insatiable appetite for love in all its guises" (Camp, 1997, p. 51). Stated using evolutionary terms, we propose that the books appeal to women because they address evolved, sex-specific mating interests.

Past analyses of romance novels have extensively relied upon socio-cultural interpretations. For example, Camp (1997) writes, "(The) stories appeal to females because they teach lessons of nurturing, of aspiring, of following your heart, and of finding success or rewards" (p. 47). Feminist scholars such as Germaine Greer (1971) propose that the stories reflect women's acceptance of their "chains of bondage" (p. 176) to patriarchy rather than their true selves. Likewise, Brownmiller, when talking about the occurrence of sex in romance novels, states, "the fantasies are usually the product of male conditioning" (1976, p. 360) rather than an accurate reflection of women's true desires. Modleski (1980) contends that the books provide an "outlet for female resentment" (p. 441) whereby heroines rebel against male authority figures.

One problem with these interpretations is that they do not satisfactorily explain why romance novels, and Harlequins in particular, have remained so incredibly popular across time and cultures. An alternative explanation is that these novels are consistently addressing topics that have universal appeal to women. Evolutionary psychology offers insight into human universals, and suggests that women and men have sex-specific mating dilemmas. That is, due to biological sex differences, women conceive children whereas men do not. Across cultures, women tend to be the primary caregivers, although men often provide paternal support (Bribiescas, 2006). Furthermore, women have notably lower limits on the number of children that they can have, as compared to men. These differences have led evolutionary psychologists to propose that women tend to seek commitment from their mates, and prefer mates who have a propensity to accrue

resources (e.g., Buss, 1989) since they will need these resources while they tend to the children. Therefore, we propose that a better interpretation for the success of Harlequin romance novels is that the books are addressing women's sex-specific, evolved, mating interests. To test this hypothesis, we analyzed the titles of Harlequin romance novels.

The titles of Harlequin romance novels have been shaped by market demands. Romance fiction publishers perform more market research than any other publishers (Eike, 1986), and presumably, they have selected the titles in response to consumer preferences. Titles must be shaped by consumer demand; readers vote with their money by purchasing the titles that interest them the most. In accordance with Malamuth (1996) and Salmon and Symons (1991), we therefore suggest that analyzing the titles is a valid way to investigate women's mating interests. Since Harlequin publishes series romance, the books of a particular series appear visually alike. The only information that a reader sees on the front cover is the title, the author's name, and an image, while the back cover contains a plot summary. As well, a small number of the books are published with an additional sub-series name, such as the series "Baby to Be," "American Dads," and "The Wedding Party." It has been suggested that a potential consumer will spend an average of eight seconds looking at the front cover, including the title, (<http://www.parapublishing.com/sites/para/information/produce.cfm>, July 15, 2009) before deciding whether or not to purchase the book, and thus, the cover must clearly identify the content to the purchaser.

An analysis of romance novel titles provides an objective means to ascertain word frequencies and recurring themes, which in turn reveal women's mating interests and mate preferences. The other sources of information on the cover are less useful, or more difficult to objectively code. For example, the series and sub-series to which the novel belongs are akin to a genre and thus, do not yield much information about women's mating interests. Similarly, authors always have a feminine name, even if the story was written by a male or written by more than one individual. Finally, the cover art, although highly interesting, represents problems for objective coding, in that there is considerable variance in what the images reveal.

The assumption that Harlequin romance novels address women's mating interests is justified, as, according to the press kit offered by Harlequin (2009), the readership of romance novels is primarily women (90.5%). According to the press kit, the majority of readers are between the ages of 31 and 49, and therefore, represent fertile women who are often mothering children. The readers are typically currently involved in a romantic relationship; in fact, romance readers are more likely than women in the general population to be currently married or living with their romantic partner. Thus, it is not accurate to suggest these women are satisfying an unfulfilled need to meet a potential mate, as they are currently romantically involved.

### *Hypotheses*

As aforementioned, our primary hypothesis was that the titles of Harlequin romance novels would address women's evolved, sex-specific mating interests. This goal is now elaborated upon with specific predictions.

First, due to sex differences in human parental investment, women make considerably larger investments in offspring than men (e.g., Trivers, 1972). This disparity in investment is apparent at the level of the gamete through to post-natal childcare. Women invest more than men in the production and raising of children, so we predict that

one emergent theme will specifically pertain to reproduction. We expect words such as baby, mommy, father and paternity will frequently appear in the titles.

Second, women can have only a small number of children, as compared to men, and therefore, they must select their mates carefully. Given that women tend to provide the majority of childcare, they may not be able to accrue their own resources and consequently, often must rely on their mates (e.g., Buss, 1989). Thus, we predict that there will be a theme oriented towards wealth, in that the hero is a wealthy man. Hence, words such as wealth, tycoon, and billionaire will often appear in the titles.

Third, due to the differences in parental investment and resource accrue ment, it has also been suggested (e.g., Buss & Schmitt, 1993) that women prefer long-term committed relationships. We predict that this preference will be displayed as an emergent theme, with words like marriage, engagement, bride, or fiancé, appearing frequently in the titles.

Fourth, since women, as do men, prefer attractive mates (Li & Kenrick, 2006), and attractiveness (including athleticism) might serve as a proxy of genetic quality, we hypothesized that a final theme would revolve around male attractiveness. Thus, words such as handsome, attractive, or athletic will frequently occur.

## **Methods**

### *Title Data*

For each Harlequin book, we collected the following information: title, author(s), series, year of publication, and whether the book had been first published elsewhere. The data were obtained from the web-site <http://www.romancewiki.com> from January to July of 2009. The data were extended to include subtitles for anthologies and other instances of multiple stories occurring in a single book, which was gathered from Amazon.com, Powell's books, Harlequin.com and other various online library and book store web-sites. It should be noted that although wikis are publicly accessible, readily modifiable, and not refereed, they can yield reliable data (for non-controversial information) because mistakes can be corrected by any technically proficient visitor to the web-site. However, to verify accuracy, we conducted random validation of titles and authors against bookstore and library databases. This process indicated that the web-site data were correct and accurate.

It should be noted that occasionally Harlequin publishes anthologies with up to three authors each contributing a stand-alone story on a common theme (e.g., Valentine's Day or Christmas). We divided these anthologies into the single stories, and entered the titles of each into the database.

Also of note is that in the early years of the company, particularly the 1940s to late 1950s, Harlequin published a small number of nonfiction books, with topics including cooking (e.g., #51, *The Pocket Purity Cookbook*, no author, 1950), childcare (e.g., # 415, *The Normal Child* by Dr. Alan Brown and Dr. Elizabeth Chant Roberson, 1958), health (e.g., # 161, *Health, Sex and Birth Control* by Dr. Percy Ryberg, 1958) car maintenance (e.g., #391, *How to Get More From Your Car* by W.J. Young and E.R. McCrey, 1957), and true crime (e.g., # 435, *Canada's Greatest Crimes* by Thomas Kellie, 1958). They also published in this time period some non-romance fiction, such as action adventure stories (e.g., #426, *The World's Greatest Spy Stories* by Kurt Singer, 1958) or mysteries (e.g., #32, *The Hollywood Mystery* by Ben Hencht, 1950, #36,

*Murder Over Broadway* by Fred Malina, 1950). These titles were included in the database to achieve completeness and avoid potential ambiguity caused by trying to determine whether a title was for a romantic book or adventure book, for example.

A database was created by manually extracting the title data from the web-site pages with the deletion of irrelevant HTML and textual content. The remaining data were given appropriate headers (e.g., Title:, Month:, Series:) so that unique text separated all fields. For anthologies, containing  $N$  stories ( $N = 2$  or  $3$ ),  $N+1$  entries were produced. The first entry described the main cover title and all authors while the remaining  $N$  entries (suffixed with a, b, and if needed, c) described the actual titles within the anthology. The exception to this format was the Harlequin Duet series for which both titles occurred on the book cover, and which only have two entries (suffixed A, and B). In the original Harlequin Romance line, some stories were published twice (and in one case, three times) with the same series number, but different titles (as confirmed by multiple web-sites). For these books, multiple entries were produced, and consequently, there was one entry for each title, but with all entries using the same series number.

The initial analysis covered 16 series of which 10 are currently being published and six are defunct. A total of 15,019 titles were analyzed of which 195 are story titles within anthologies (not considering Harlequin Duets or multiply-titled Harlequin Romances). The earliest books are published in 1949 (month unavailable) as part of the Harlequin Romance series, and the most recent are from June 2009. Note that we did not consider books that Harlequin reissued (e.g., the series “Born in the USA,” composed of 52 books with the hero coming from each state) because titles were unaltered from the original publication and the reissued books were only available by mail order or online purchase.

Table 1 contains information on the series, based on information obtained from Harlequin’s website or the Romance wiki. The series are interesting in themselves, as they indicate the various subgenres within modern romance fiction. Note that there have been numerous changes over the years to some of the series, and hence, we only provide a brief overview of the recent status of the series.

**Table 1: Harlequin Romance Novel Series**

| Series        | Longevity    | Status  | Number of Titles | Description and Notes  |
|---------------|--------------|---------|------------------|--|
| Romance       | 1949-present | Ongoing | 4,203            | Flagship series. A few 1940s-1950s books were not romantic in content and discussed “traditional” women’s topics such as cooking or childcare.   |
| Presents      | 1973-present | Ongoing | 2,820            | Advertised as “meet sophisticated men of the world and captivating women in glamorous international settings. Seduction and passion guaranteed.” |
| Love Inspired | 1977-present | Ongoing | 490              | Strong spirituality, with primarily Christian focus.   |
| Superromance  | 1980-present | Ongoing | 1,517            | Advertised as “today’s woman in today’s world.” These romances are longer and emphasize the development of secondary characters and subplots.    |

*Evolutionary Interpretation of Romance Fiction Titles*

|  |              |         |                   |  |
|--|--------------|---------|-------------------|--|
| American Romance                                       | 1983-present | Ongoing | 1,291             | Advertised as “fast-paced, heartwarming stories about the pursuit of love, marriage and family in America today” and are set "everywhere that people live and love".   |
| Intrigue   | 1984-present | Ongoing | 1,179             | This series combines romance and suspense.   |
| Historical   | 1988-present | Ongoing | 1,016             | The series started with a focus on European history and then shifted to American history.  |
| Blaze  | 2001-present | Ongoing | 530               | Stories have a contemporary feel and emphasize the physical relationship between the couple. Stories run from flirtatious to dark and sensual, and the line pushes boundaries in terms of characterization, plot, and explicitness.                        |
| Medical Romance  | 2001-present | Ongoing | 398               | The stories feature hospital settings or medical professionals   |
| NASCAR (National Association of Stock Car Auto Racing) | 2007-present | Ongoing | 34                | These novels are due to a special licensing agreement between Harlequin and NASCAR. It is a series of category-length special-release titles, all of which involve NASCAR-related romance stories.   |
| Mystique   | 1977-1982    | Defunct | 164               | Mainly romantic suspense with a few of the novels having Gothic elements such as family secrets, madness, murder and old frightening houses and mansions.  |
| Temptation   | 1984-2005    | Defunct | 1,029             | This line featured strong men and women in touch with their sexual natures.  |
| Love and Laughter                                      | 1996-1999    | Defunct | 66                | This series is composed of humorous love stories. It combined with Silhouette’s “Yours Truly” series in April 1999.  |
| Duets  | 1999-2003    | Defunct | 216 for 108 books | Each volume contained two full-length novels (the same length as the prior Harlequin’s “Love And Laughter” and Silhouette’s “Yours Truly” books), generally coupling two distinct authors, though there were instances of a single author for both titles. |
| Flipside   | 2003-2005    | Defunct | 42                | These novels were humorous, chick-lit inspired.  |
| Everlasting Love                                       | 2007-2008    | Defunct | 24                | Love stories that occurred over a longer period of time than the usual romance.  |

Note: the descriptions are primarily based on those from Harlequin (2009) or the Romance wiki.

In addition to the titles of Harlequin’s romance novels, we also included those of the Silhouette line. This line was originally produced by the Silhouette Book Publishing Division of Simon and Schuster, who specialized in category-length romance. The Silhouette imprint was acquired by Torstar, the parent company of Harlequin Enterprises, in 1984 (Eike, 1986). Harlequin retained the Silhouette name, and continues to publish Silhouette novels as though this were a separate company.

The Silhouette line contained eight series, of which four are currently published and four are defunct. Together, there was a total of 7,758 titles that we included in our analysis, which encompassed the 18 story titles within an anthology. The earliest books were published in 1980, and the most recent are from August 2009 in currently released series. The provided descriptions are generally as found on the Romance wiki (see Table 2). It should be noted that we did not include Silhouette’s “First Love” series or its successor “Crosswinds,” as they were specifically oriented towards a young adult market, whereas the rest of the novels we analyzed were oriented specifically towards adults. There was one instance of the same title appearing twice. In Silhouette’s Romance line, *Be My Baby* was used for two separate books (#667 by Brenda Trent, 1989, and #1733 by Holly Jacobs, 2004), and thus, this title was entered into the database twice. The combined total from Harlequin, including the Silhouette books, was 22 777 titles.

**Table 2: Silhouette Romance Novel Series**

| <b>Series</b>    | <b>Longevity</b> | <b>Status</b> | <b>Number of Titles</b> | <b>Description and notes</b>  |
|------------------|------------------|---------------|-------------------------|---|
| Special Edition  | 1982-present     | Ongoing       | 2,000                   | Longer romances with more sophistication to counter the ‘sweeter’ and innocent feel of the “Romance” series.                  |
| Desire           | 1982-present     | Ongoing       | 1,962                   | A hotter, sexier line similar to Harlequin’s “Temptation.”  |
| Intimate Moments | 1983-present     | Ongoing       | 1,586                   | Combined romance and suspense novels. This line was renamed Romantic Suspense in 2007.  |
| Nocturne         | 2006-present     | Ongoing       | 79                      | Paranormal romances.  |
| Romance          | 1980-2007        | Defunct       | 1,851                   | Merged with Harlequin’s “Romance” line in 2007. This was Silhouette’s flagship line.  |
| Shadows          | 1993-1996        | Defunct       | 66                      | The series involves Gothic, paranormal and suspense-themed books.   |
| Yours Truly      | 1995-1999        | Defunct       | 90                      | The novels are romantic comedies. This series merged with Harlequin’s “Love and Laughter” in 1999 to form the series “Duets.” |
| Bombshell        | 2004-2007        | Defunct       | 124                     | The stories involve strong heroines inaction-adventure stories.   |

### *Data Normalization*

To perform accurate word frequency counts, data normalization was performed with the intention of creating consistency within the database. There were four steps to this procedure. First, character replacement was performed. For example, an ampersand (i.e., &) was replaced with the word “and,” capital letters were replaced with equivalent lower-case letters, all accents were removed from words, and hyphens were replaced with spaces to create multiple words. Second, punctuation was removed. Commas, apostrophes, colons, periods, exclamation points, and question marks were removed, with the exception of indicators for measurements of “feet” and “inches,” in which case they were replaced with the words “feet” and “inches.” Accents were also removed, as were multiple or inappropriate spaces (e.g., before a comma). Third, American spellings were replaced with European/International spelling (e.g., colour for color). As Harlequin is a Canadian company with a historical majority of the books coming from Commonwealth countries where international (i.e., British) spelling is used, we chose to minimize the impact on the data by converting American spelled words to their international equivalent (e.g., “color” to “colour”). However, every replacement was examined to ensure it was valid and appropriate. The only words that were affected were honour, colour, and humour. Fourth, common abbreviations (i.e., Mr., Dr., M.D., lb, oz, Lt.) were expanded to their full word (e.g., Mister, Doctor), as some titles contained the full word. Less common abbreviations (e.g., CEO) were left unaltered. Note that the abbreviations “Miss,” “Mrs.,” and “Ms.,” were not considered since all expand to the word Mistress.

Prior to analysis, stop words were also extracted. Stop words are words that are typically discarded by WWW search tools (e.g., Google) because they occur frequently and have minimal information content. Examples of stop words are: and, if, the, for, then. The stop words we used were developed by the U.S. National Institute of Standards and Technology and were those that the first author previously used in text retrieval experiments that have been published in the information retrieval literature (Keselj & Cox, 2004).

A final issue that requires explanation is stemming. Stemming is a process in which word suffixes (e.g., ed, ing) are removed to coalesce word lists into shorter lists of words containing only their common base or stem. For the English language, stemming creates inconsistent results in search tools (Baeza-Yates & Ribero-Neto, 1999) and hence, we chose to do a full comparative analysis before deciding whether to apply stemming. That is, stemming might alter the meaning of the word (e.g., change a meaning from singular to plural, or tense from present to past), so they were not initially removed. Instead, we compared the frequency counts of words with and without the application of stemming. It was possible to use a manual approach to stemming due to the limited number of words of interest (approximately 500) and therefore, we did not apply an algorithm such as Porter’s (Baeza-Yates & Ribero-Neto, 1999 (Appendix)). Given that there was very little difference (i.e., predominately an increase in stem frequencies but no change in the order of stemmed versus unstemmed words) we opted to include stemming in our results. Thus, for example, the words “children,” “childrens,” and “childs” were discarded and their frequency counts added to their stem “child.” Although the process is not entirely accurate, in that “childrens” only exists properly in the possessive (i.e., “children’s”), this technique was applied consistently throughout the database so that stem frequencies are reported accurately.

## **Results**

For interest, we explored the 20 words (with stemming) that appeared the most frequently in the database, thus reflecting the most commonly occurring words within the titles of Harlequin romance novels. These are presented in Table 3. As can be seen, words linked to long-term committed relationships (i.e., bride, marriage, wife, wedding and husband), and reproductive success (i.e., baby and child), are within the top 20 words, thus providing some support for our hypotheses. However, words related to physical fitness did not appear, nor did words pertaining to resources. In both instances though, occupations that are normally linked with fitness (i.e., cowboy) and prestige and high income (i.e., doctors) were in the list. Thus, we explored the 20 most frequently listed professions, presented in Table 4. Three of these occupations are female-dominated (i.e., nurse, secretary, and midwife). Interestingly, the other 17 professions can readily be divided into two primary themes: resource-based (e.g., doctors, surgeons, CEOs, kings) and athletic (e.g., cowboys, cattlemen). Perhaps related to the athletic theme is that of protectors (e.g., sheriffs, soldiers, lawmen) since these professions also require a high level of physical fitness. Therefore, our hypotheses concerning resources and physical fitness gained at least partial support, given the emphasis on these professions.

**Table 3: The 20 Most Frequent Words in Harlequin Romance Novel Titles with Stemming**

| <b>Word Stem</b> | <b>Frequency Count</b> |
|------------------|------------------------|
| Love             | 840                    |
| Bride            | 835                    |
| Baby             | 696                    |
| Man              | 672                    |
| Marriage         | 612                    |
| Heart            | 478                    |
| Secret           | 399                    |
| Wife             | 397                    |
| Doctor           | 388                    |
| Night            | 340                    |
| Christmas        | 337                    |
| Cowboy           | 314                    |
| Wedding          | 298                    |
| Child            | 260                    |
| Family           | 248                    |
| Texas            | 227                    |
| Nurse            | 224                    |
| Woman            | 207                    |
| Lady             | 202                    |
| Husband          | 192                    |

**Table 4: The 20 Most Frequently Occurring Professions In Harlequin Romance Novels**

| <b>Occupation</b> | <b>Frequency Count</b> |
|-------------------|------------------------|
| Doctor            | 388                    |
| Cowboy            | 314                    |
| Nurse             | 224                    |
| Boss              | 142                    |
| Prince            | 122                    |
| Rancher           | 79                     |
| Knight            | 77                     |
| Surgeon           | 77                     |
| King              | 55                     |
| Bodyguard         | 41                     |
| Sheriff           | 40                     |
| Soldier           | 38                     |
| Lawman            | 32                     |
| Pirate            | 28                     |
| Secretary         | 23                     |
| Consultant        | 21                     |
| Midwife           | 21                     |
| Cattleman         | 16                     |
| CEO               | 15                     |
| Executive         | 13                     |

Note: For the potential interest of academic readers, we report that “professor” appeared six times in the titles, which was slightly less than “Viking” (nine occurrences) and more than “trucker” (two occurrences).

We then undertook a grounded thematic analysis of the words used in the titles. The analysis was divided into three basic stages, mirroring the widely established “grounded theory” approach of Glaser and Strauss (1967). First, “open coding” was performed, in which all of the words were read, free of any extraneous information (e.g., the frequency counts, other words in the titles) and general categories were identified (Strauss, 1987; Lindlof & Taylor, 2002). The process is completely unrestricted in that the data are chunked according to their coherent meaning (Lindlof & Taylor, 2002). In the second, “integration” stage (Glaser & Strauss, 1967), the identified categories were examined in connection to each other to locate interconnectivity and collapse many categories into a few, broader themes. As a consequence, the analysis yields theoretical constructs (Lindlof & Taylor, 2002). In the third, “dimensionalization” stage (Glaser & Strauss, 1967) the components of the theoretical constructs were fully explored to the extent that the study became “theoretically saturated.” At this point, new words added minimal value to the existing themes (Lindlof & Taylor, 2002), which signaled that the analysis was complete.

Our analysis revealed eight themes, which are presented in order from the largest to the smallest, based on the total number of words each theme contained. The first was a theme of commitment, which included the words: marriage, wedding, bride, groom, husband, wife, honeymoon, engagement, fiance, alter, and bachelor, with a cumulative total of 2,793. That is, these words appeared a total of 2,793 times in the database. The second theme was reproduction, composed of the words: baby, child, mommy, daddy, mother, father, daughter, son, pregnant, paternity, and maternity, with a cumulative total of 1,830. The third theme was a Western theme, including the words: cowboy, Texas,

Montana, Wyoming, cattleman, horseman, lawman, horse, rodeo, western, wrangler, shotgun, sheriff, outlaw, and ranch, with a cumulative total of 1,015. The fourth theme involved resources, and composed of the words: millionaire, billionaire, tycoon, fortune, wealth, money, diamond, dollar, inheritance, heir, gift, treasure, rich, and gold, with a cumulative total of 796. The fifth theme was medical, composed of the words: doctor, nurse, surgeon, operation, medical, hospital, and surgery, which had a cumulative total of 771. The sixth theme was Christmas, which included the words: Christmas, holiday, Santa, mistletoe, and angel, with a cumulative total of 551. The seventh theme was royalty, composed of the words: king, prince, royal, castle, knight, queen, duke, duchess, and palace, with a cumulative total of 489. The final, eighth theme was professional, which contained words: professional, consultant, executive, boss, secretary, corporate, CEO, office, business, company, boardroom and assistant, with a cumulative total of 302 occurrences.

### **Discussion**

In this paper, we explored the frequency of words within Harlequin romance novel titles in an effort to ascertain whether the titles are congruent with predictions informed by evolutionary theory. Women, who are the primary readers of romance novels, are “voting” with their money by purchasing the books that interest them. The title of Harlequin novels is a key element of women’s decision to purchase a book, and hence, must captivate them in some way.

The 20 most frequent words clearly suggest long-term commitment and reproduction are important to readers. We did not find words related to resources or physical attractiveness within this list, but did find that the occupations of doctor and cowboy were included. Thus, we analyzed the 20 most frequent professions listed within titles. Many of the occupations were centered around high incomes (e.g., surgeon), or positions that demand physical fitness (e.g., cowboy). There were also professions related to protection (e.g., sheriff) that may be related to physical fitness because of the highly physical nature of these professions.

After examining the most frequent words and exploring the twenty most commonly listed professions, we performed a thematic analysis. The outcomes of the analysis clearly support our hypotheses that the titles would display themes related to reproduction, resources, and long-term commitment. However, they only weakly support the hypothesis that the titles would contain elements of physical attractiveness and fitness. In fact, the word “attractive” appears only once in the database, and “handsome” only six times. Synonyms like “gorgeous” appear rarely (gorgeous appears three times), and the word “athletic” does not appear at all. This said, it must be noted that there are only a few adjectives that describe the characters’ traits in the database. The majority of the words are nouns that identify the characters’ roles, such as “bride,” “executive,” or “husband.” This contention is supported by the list of the most frequently occurring words presented in Table 1. Therefore, one explanation for why we did not find support for our hypothesis regarding physical attractiveness is because the titles typically include nouns and not adjectives.

Given this problem, an alternative source of evidence is necessary. We propose that the Western theme might relate to women’s preference for attractive mates. Whereas doctors, surgeons, executives and kings earn high incomes or have considerable resources, cowboys are traditionally displayed as resource poor. Often, in real life and in

fiction, they are worth less than the cattle they tend to or the horses they ride. For example, among scholars in the area of cowboy studies, there is concern that no one counted cowboys to determine how many there were historically or how many there are today. The fact that people have historically counted cows is drawn as a comparison; cattle are closely tied to money, and hence, they are carefully counted. The men behind the cattle trade were historically cheap labor, “they were ultimately less important than the animals they tended; men could be hired anywhere at any time...for only a few dollars a month” (Savage, 1985, p. 7).

Cowboys are unequivocally American (Fishwick, 2004; Seiler, 2008), and many scholars have written about the way in which cowboys embody the American ethos. For example, Allan (1998) contends that the popularity of cowboys and the western motif is because it taps into the emotions of Americans, telling the “epic story of...[their] crossing a continental frontier and taming its wild forces, planting and nurturing the seeds of American civilization” (p. 203). They also represent “rugged individualism...unadorned masculinity...and ultimate heroism...[cowboys are] immediately recognizable” (Savage, 1985, p.4). In real life and in fiction, cowboys are generally young and athletic enough to ride horses and handle cattle (Frantz & Choate, 1968). They are honest men of virtue who are prepared to defend themselves, and sometimes, a woman in need (Fishwick, 2004). They symbolize freedom, individuality, a closeness to nature, and living a daring life (Fishwick, 2004). In reality, they are often adventurous, sons of small-time farmers who seek opportunities to leave their small family farms (Savage, 1985). A sport that cowboys might participate in is rodeo work, which is “more dangerous...than any other sport featured before the American public” (Ward, 1987, p. 7). Cowboys are athletic and have high physical fitness, as their duties primarily involve physical labor. For example, they must physically handle calves, feed stock (which might involve carrying heavy bales of hay or moving water), create corrals, rope and hold animals that need medical attention, and fight prairie fires (see Ward, 1987, for a review). Their attitude is also like that of athletes when it comes to pain and injury (Pearson & Haney, 1999). Finally, they can be reckless, and may take risks for fame and fortune (Savage, 1985).

In many ways, the description of cowboys is congruent with the dark hero of British romantic literature, who embodies a cad-type male mating strategy (Kruger, Fisher, & Jobling, 2003). Although this trend is interesting, one must not mistakenly believe that the cowboys in Harlequin romance novels are simply cads. In all instances, the male protagonist is transformed to be a loyal, kind, stable individual by the end of the book. Regardless, the similarity between the roguish cowboy and the dark hero is apparent. Similarly, casual observation suggests that doctors are often portrayed in a manner that reflects the proper hero of British romantic literature, who embodies more of a dad-type male mating strategy (Kruger, Fisher, & Jobling, 2003).

Due to their careers in a helping profession, anecdotal evidence suggests that doctors are commonly seen as being nurturing and caring. Indeed, they have invested their careers into training in a profession where they will take care of others and earn a generous salary. General practitioners are perceived to be friendly, deeply interested in people, extremely patient, and sensitive (e.g., Harris, 1981). In a similar manner, those involved in professions related to protection (e.g., bodyguard, lawman, sheriff) can also be viewed as putting the needs of others ahead of their own, as individuals in these professions are often injured when protecting others when performing their duties.

One issue that is of particular interest is how the heroine and hero's occupations often complement each other. The titles suggest that medical romances were especially

popular in the 1960s, and lead to their own series in 2001. A recurrent theme in these stories is that of the doctor and nurse who meet and then fall in love. Nursing was a role that society deemed appropriate for women to fill, and seen as a complement to the role of the male doctor (Papanek, 1973). Similarly, secretaries were also seen in the same light, as a complement to a male boss or employer. Thus, it is not surprising that nurse and secretary both appear among the most frequently listed professions. The third female-dominated occupation to be mentioned was midwife, again a traditional role for women, and one that might allow an author to introduce a romance between a doctor and midwife, for example.

We had not anticipated that the medical theme would be appear so distinctly in the database, but it is sensible that it did, based on the fact that Harlequin has a series just on medical romance. We had also not expected a theme pertaining to royalty to emerge, which is congruent with the historical series. In contrast to many of the other series, such as “Romance,” “Presents,” “Temptation,” or “Blaze,” both the medical and historical lines are narrowly focused around a small number of possible individuals and topics. Recurrent themes such as the interactions between doctors and nurses, or of a Duke in search of a Duchess are to be expected, given the narrow focus of these series.

In addition, we had not expected the theme of Christmas. In hindsight, it is logical that there should be a specific theme for this holiday, given that casual observation clearly indicates that Harlequin releases titles specifically for the Christmas market. Other holidays that appear in the titles are Valentine’s Day (55 times), Thanksgiving (eight times) and Easter (two times).

Finally, whereas the themes labeled above as commitment, reproduction, resources and Western support our hypotheses, the theme of professional warrants further comment. It partially relates to the theme involving resources, in that executives typically earn high incomes. It also suggests the authors are attempting to use plausible settings in order to identify with readers. Many women work within professional settings, and hence, this theme is one with which they might be able to identify. Women have long been secretaries, and thus, an easy plot device would be to have a male boss and a female secretary become romantically involved. Although it would be more progressive and unconventional for a female boss to become involved with a male secretary, a search of all incidence of the word “secretary” revealed that, in all instances it was a female secretary. Therefore, we contend that the popularity of the professional setting might partly rest on the ease with which readers can identify and relate to this context.

A major strength of this research is that it relies on real-world data, rather than self-report or recalled behavior. We posit that the measures we used to obtain our results provide objective data on women’s mating interests. Although it is possible that Harlequin knows of the importance in using evolutionarily-salient themes in their books, in that they have researched the scientific literature from this field, it is more plausible that the company has simply discovered through trial and error that the most successful themes are those informed by evolutionary psychology. Indeed, a cursory scan of all of the titles ever published by Harlequin shows a transformation over time, such that the novels have slowly changed to being more congruent with the findings of evolutionary psychology. There exist obvious gaps between the scientific literature and the titles. For example, there are no titles that address the fact that women seek attractive mates, at least for short-term relationships, a finding from the evolutionary literature (e.g., Li & Kenrick, 2006). Short-term relationships are all together ignored by romantic novels, as the key element to this genre is that the heroine and hero fall in love and by the end of the

book, they are initiating a long-term relationship. Moreover, some of the series (such as those that involve the paranormal) have seemingly no evolutionary underpinnings, and the number of titles from these series suggests that they are not as successful as compared with the series that are focused on traditional romance. Therefore, it does not seem that Harlequin has an awareness of the scientific literature, and hence, the data collected here can be seen as objective, unobtrusive, and informed by market demands.

There are at least two limitations with the current study. First, there are some words that have likely been misinterpreted because they rely on American slang. For example, the title *Be My Baby* could refer to someone's child or to his or her lover. The word "baby" does not always suggest a child, as it is popular in Canada and the United States to refer to a lover as "baby." Words that have both a dictionary definition and a different slang meaning were not disentangled, so some of the word frequencies we obtained might not be as accurate as we intended.

A second limitation is that we could not weigh the titles according to sales figures to determine what titles are the most successful. For example, is it the case that titles with the word "cowboy" in it are almost as successful as those containing "doctor" or "billionaire?" Market data such as this is not publicly available. We attempted to search for the bestsellers produced by Harlequin, but the company only releases these data based on that day's sales for books that have been ordered. Hence, at the time of writing this article (September, 2009), the bestsellers according to the company website were only for books to be published in October and the ranking was based exclusively on mail or Internet orders.

In summary, we investigated the titles of Harlequin romance novels for the purpose of determining whether the titles are aligned with predictions offered by evolutionary psychology. We argued that the titles reflect consumer demands, and therefore, must be of interest to potential readers. Since the overwhelming majority of Harlequin readers are women, the titles must address women's interests. We supported our hypotheses that the titles would reflect issues pertaining to women's preference for long-term committed relationships, to reproduction and motherhood, to the necessity to find a mate with resources, and to their preference for physically fit mates. We have also shown that obtaining real-world data such as that offered through novel titles may be effectively used to explore issues that are relevant to evolutionary psychology.

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