Jealousy in India and the United States: A cross-cultural analysis of three dimensions of jealousy

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Abstract

This study examined behavioral, cognitive, and emotional jealousy in India ($N = 1,111$) and the United States ($N = 1,087$). Significant differences were found between men and women for all dimensions of jealousy. Indians reported less cognitive and emotional jealousy than Americans. Religion was found to be a significant predictor of jealousy. Hindus were higher on cognitive and emotional jealousy, while Christians were higher on cognitive jealousy than Muslims. Results also show the interaction of sex and religion affected jealousy. Results of this study indicate both biology and social context influence jealousy.

Keywords: Jealousy, Sex, Religion, Nationality, Cross-cultural
Jealousy is pervasive among people of all ages and cultures (DeSteno, Valdesolo, & Bartlett, 2006). Due to its ubiquitous and mysterious nature, jealousy has been widely studied by scholars. Jealousy is viewed differently by some cultures than others, it can damage relationships, it can influence the quality of one’s social life, and it can decrease relational satisfaction (Bevan, 2008; Lavallee & Parker, 2009; Parker, Low, Walker, & Gamm, 2005). Jealousy can result in alteration of self-perception, aggression, and violence (Gage & Hutchinson, 2006; Telesco, 2003).

While research exists on the causes and effects of jealousy, studies have not adequately examined how one’s identity can affect jealousy. Ellestad and Stets (1998) called for further work examining the relationship between jealousy and identity. One approach to understanding identity is Tajfel and Turner’s (1986) social identity theory (SIT). This theory proposes the self-concept consists of both a social and a personal identity. The primary tenet of SIT is that the groups with which we identify, such as our religion, gender, nationality, profession, etcetera, determine our multiple social identities (Abrams, O’Connor, & Giles, 2003; Perrault & Bourhis, 1999). Our social identities influence a multitude of behaviors, traits and/or processes, ranging from what we eat, to our clothes, our group memberships, and our self-esteem (Baber, 2004; Lantz & Loeb, 1996; Oakes, Haslam, & Turner, 1994; Negy, Shreve, Jensen, & Uddin, 2003; Perrault & Bourhis; Tajfel, 1981).

The multiple identities and group memberships of individuals could influence jealousy. There are three particular social identities that could influence jealousy under examination in this study: sexual, religious, and national. Scholarly debate abounds over whether jealousy varies according to sex (i.e. DeSteno, et al., 2002; Harris, 2003a). There is less research on religious and national identification even though both can be significant aspects of identity (Tajfel, 1981). Furthermore, an individual’s religious and national identity (nationality) has been found to influence other traits/behaviors such as: approaches to conflict, ethnocentrism, self-esteem, and self-construals (Kandath, 2006; Kapoor, Hughes, Baldwin, & Blue, 2003; Negy, et al., 2003). Overall, little is known about how religion and nationality influence jealousy, and how both factors might interact with sex in this process. Therefore the current study examined the potential effects of sex, nationality, and religion on jealousy in the United States and India.

One cannot and should not assume jealousy research conducted in the U.S. accurately reflects jealousy in India. India is not only a different country; it is also a conglomeration of significantly different ethnic and religious cultures (Akbar, 2003). Differences are likely to be revealed in analyses of jealousy. Many reasons justify a comparative analysis of jealousy between India and the U.S. Culturally, the two nations differ on some of Hofstede’s (2001) cultural dimensions. While both are democracies, with India being the world’s most populous democracy, there are significant political differences, which surface over international issues such as global warming (emissions), the war in Iraq, and the US war on terror (Labott, 2009). Economically, India is one of the U.S.’s largest trading partners, and one of the fastest growing economies (Tharoor, 2007). In consideration of the potential influence of multiple identities on jealousy and the cultural contrasts between the U.S. and India, we undertook a comparative analysis of jealousy in India and the U.S.

**Jealousy Defined**

Numerous definitions of jealousy can be found in the literature. White and Mullen (1989) offer a broad definition of jealousy as exemplars of thoughts, feelings, and behaviors that can be viewed when self-esteem or a romantic relationship is threatened in specific situations. Ellis and Weinstein (1986) defined jealousy as the emotion people experience when control over
valued resources is perceived to be in jeopardy due to an intrusion of a third person in a relationship, triggering suspicion. According to this definition, an act of suspecting and preventing this third party from draining off these resources constitutes jealousy.

Researchers have identified various types of jealousy such as sexual jealousy (Buss & Haselton, 2005), romantic jealousy (Bringle & Boebinger, 1990; Sharpsteen, 1991; White & Mullen, 1989), and emotional jealousy (Guerrero & Anderson, 1995; Theiss & Solomon, 2006). The experience and expression of jealousy ranges in intensity and severity, and its consequences range from relatively benign to pathological effects such as abuse and violence (Dutton, vanGinkel, & Landolt). Jealousy in its extreme form has been characterized as “morbid” (Harris, 2003a; Keenan & Farrell, 2000).

**Emotional Jealousy**

Pfeiffer and Wong (1989) conceptualized three dimensions of jealousy: emotional, cognitive, and behavioral. Much of the literature has focused on the emotional component of jealousy. Emotional jealousy consists of an affective reaction to a real or an imagined threat to a valued relationship (Theiss & Solomon, 2006). Emotional arousal encompasses any number of negative feelings such as anxiety, discomfort, anger, fear, insecurity, and upset. Depending on the circumstances, emotional jealousy may also include feelings of sadness, guilt, sexual arousal, and envy (Guerrero, Trost, & Yoshimura, 2005; White & Mullen, 1989).

**Cognitive jealousy**

Numerous studies have examined the role of cognition in jealousy, which involves the appraisal of threat to a relationship (Fitness & Fletcher, 1993; Harris, 2003a; Nannini & Meyers, 2000). Cognitive jealousy involves a person’s worries, doubts, and suspicious thoughts about a partner’s potential infidelity or external relationships (Theiss & Solomon, 2006). It includes paranoid worries and suspicions about rivals to a valued romantic relationship. Cognitive jealousy involves the construction of elaborate cognitive scenarios that result in biases toward perceiving relational threats and misinterpretation of the partner’s behavior (Rydell & Bringle, 2007). Examples of cognitive jealousy include imagining a romantic partner as unfaithful, interpreting certain behaviors as flirting, or comparing oneself with a perceived romantic rival.

**Behavioral jealousy**

Pfeiffer and Wong (1989) conceptualized behavioral jealousy as the “detective/protective measures a person takes when relationship rivals (real or imaginary) are perceived” (p. 184). Expression of jealous behaviors manifest in many ways, but what they have in common is the intent to either protect the relationship or detect potential threats to the relationship, and the goal of ensuring that intimacy between the partner and rival does not occur. Examples of behavioral jealousy include: questioning, checking up on one’s partner, searching his/her belongings, making derogatory statements about the rival, or attempting to interject oneself between the partner and rival when they are engaged in conversation. Based on this definition, stalking or surveillance of one’s partner would constitute a more severe form of behavioral jealousy. White (1981) viewed such behaviors as strategies to cope with emotions, particularly as jealousy is more likely to occur for individuals who are in committed relationships than for individuals who are single (Pines & Aronson, 1983; White & Mullen, 1989).

**Predictors of Jealousy**

Broadly speaking, research has found jealousy to be predicted by interplay of factors relating to the jealous person’s sex, the jealous person’s personality or psychological make-up, and aspects of the social context. Of particular interest to this study are the jealous person’s sex (a sociocultural, as well as biological, factor), along with nationality and religion (social context
factors). Scholars divide along the lines of the relative importance of sex versus social context. Despite a vast and growing body of research investigating jealousy, no cross-cultural studies have examined sex, national, or religious differences in jealousy based on the three dimensions (emotional, cognitive, and behavioral) proposed by Pfeiffer and Wong (1989).

**Sex**

Previous research has found consistent sexual differences in jealousy and that an individual’s sex can predict jealous responses and behaviors (Cann, Mangum, & Wells, 2001; Cramer, Abraham, Johnson, & Ryan-Manning, 2001; Groothof, Dijkstra, & Barelds, 2009; Guerrero, Spitzberg, & Yoshimura, 2004; Schutzwohl, 2006; Ward & Voracek, 2004). For example, men are more likely than women to express jealousy by engaging in behaviors that exhibit their financial and material resources to their rivals, whereas, women are more likely than men to respond by enhancing their own physical attractiveness when jealous, especially when an involved third party is attractive (Guerrero et al., 2004).

Some scholars have theorized such differences are innate and biologically-based, due to evolutionary processes that cause men to be higher in sexual jealousy and women to be higher in emotional jealousy (Barrett, Frederick, Haselton, & Kurzban, 2006; Buss, 2001; Schutzwohl, 2006; Ward & Voracek, 2004). Scholars who have adopted the evolutionary approach have found women to be more jealous of emotional infidelity, and men to be more jealous of sexual infidelity (Fernandez, Sierra, Zubeidat, & Vera-Villarroel, 2006; Guerrero, et al.). From an evolutionary perspective, men’s jealousy of sexual infidelity is explained by the competition between men for women to bear their children and the view that sexually faithful partners are crucial for reproductive survival (Pines & Friedman, 1998), whereas women’s jealousy of emotional infidelity is explained by the fear of loss or limitation of financial resources, and fear that their partner’s infidelity will result in limited commitment to the relationship, limited trust, and distancing (Mullen & Martin, 1994).

Various scholars have challenged the evolutionary perspective on sexual differences in jealousy (DeSteno, et al., 2002; Harris, 2003a). In Harris’s review of evidence that supported the existence of sex/gender differences in jealousy, she concluded, “the review raises grave doubts about how much of a sex difference actually exists” (p. 116). In addition she suggests the use of the forced choice method in collecting data raises serious doubts about its accuracy in measuring actual jealousy. Penke and Asendorpf (2008) found sexual differences in emotional jealousy that existed under cognitive constraint (i.e., on forced choice tasks) were larger for participants with lower education and smaller for those with higher levels of education, indicating sexual differences may be mitigated by other factors such as education level or measurement methods.

A number of authors have suggested cultural beliefs contribute to sexual differences in jealousy. For example, Guerrero, et al. (2004) found, “women were more likely than men to believe that the opposite sex can enjoy sex outside an emotionally close relationship” (p. 325) and such beliefs vary according to culture. White & Mullen (1989) also suggested culture should be taken into consideration when studying the relationship between sex and jealousy, because just a few studies have examined these three variables. To that end, Pines and Friedman (1998) conducted four studies, the first three in the U.S., and the fourth in Israel. They looked for sexual/gender differences in jealousy using a sociocultural framework, which included features of evolutionary theory. The findings suggested there were “no gender differences in reported jealousy” (p. 65). The authors asserted their findings questioned the evolutionary perspective.

Physical characteristics of rivals also play a role in the responses of men and women. Dijkstra and Buunk (1998) found women were predisposed to have high levels of jealousy when
their adversaries had low hip-to-waist ratios, and men were more prone to be jealous when their rivals had broad shoulders and small waists. However, a study using qualitative and quantitative methods suggested women reported trust issues and jealousy with body image only when quantitative measures were used. Qualitatively, only a few participants acknowledged a strong connection between jealousy and body image (Ambwani & Strauss, 2007). As studies of the effects of sex on jealousy vastly differ, we pose the following research question regarding the communicative expression of jealousy:

**RQ1:** To what extent will sex affect jealousy?

**Nationality**

Several studies have found differences between nationalities in the expression of jealousy. Nationality may affect whether or not a behavior or situation is perceived as a threat that triggers jealousy. For example, Americans tend to consistently rate extramarital affairs as negative events (Glen & Weaver, 1979; Metts, 1994), whereas Swedes, Danes, the Dutch, and Belgians report less sensitivity to extramarital affairs (Buunk & VanDriel, 1989; Christensen, 1973). Moreover, Americans and Europeans tend to view sexual exclusivity as the central issue of jealousy, whereas Mexicans tend to identify distrust as the central issue (Hupka et al., 1985). Also, Kuppens, Ceulemans, Timmerman, Diener & Kim-Prieto (2006) suggested nationality plays a significant role in shaping emotions such as jealousy, and that nations also differ with respect to how often their inhabitants recall experiencing interpersonal emotions or jealousy.

Several studies suggest nationalities differ in the way they regulate expressions of jealousy as well. For example, Dutch respondents reported control of their expressions of jealousy more than Italian respondents (Zammuner & Fischer, 1995). The manner in which jealousy is expressed is perceived as more or less acceptable differs nationally. Delgado, Prieto, and Bond (1997) compared two studies of jealousy and domestic assault in Britain and Spain, and found when jealousy motivated assault, the Spanish were more likely to blame the victim, whereas the British were more likely to blame the attacker. According to these authors, emotions function differently in various nations regarding perceived causes of and justification for conduct.

Sexual jealousy has been found to be more prevalent and acceptable in nations where marriage and property ownership appear to be determinants of social status (Hupka & Ryan, 1990), as well as in masculine, patriarchic nations with rigid sexual roles (Hofstede, 1980; Rathus, Nevid, & Fisher-Rathus, 1993; Whitehurst, 1977). Similarly, Wilson and Daly (1992) argued male “proprietariness”, defined as men laying claim to women much as they do to property, varies from nation to nation and is related to sexual jealousy in men. As a result, the jealous behavior of men in nations where marriages are not based on emotional bonds may result from having their property taken away (Harris, 2003a). Although numerous studies have found differences in jealousy based on nationality, other studies have found similarities between nations. Hupka and Zaleski (1990), for example, found predictors of jealousy are relatively similar across nations. In another study, Fernandez, et al. (2006) did not find any significant differences between Spanish students and students from other countries’ response to hypothetical situations of sexual infidelity.

**Comparison of India and the United States**

Hofstede’s (1980) dimensions of culture offer a starting point for broad cultural comparison (Jandt, 2004). Based on Hofstede’s work, the U.S. and India differ on two dimensions of interest to this study. Individualism/collectivism refers to the degree to which individuals define themselves in regards to others. While the U.S. ranked highest in Hofstede’s
2001 study on individualism (e.g. focused more on the individual and less on the group), India ranked in the middle of the continuum. This mid-range score reveals how India is changing from a more communal culture (collectivistic) to a more individualistic culture (Kapoor, et al., 2003). A representation of the difference between these two cultures is religious practice. The U.S. is a predominantly Judeo-Christian nation, which largely emphasizes individualism, while India has a Hindu majority and a large Muslim minority that are mainly collectivistic in nature (Ahuja, 2008; Croucher, Turner, Anarbaeva, Oommen, & Borton, 2008).

India is a higher power-distance culture than the U.S. Power distance is “the extent to which less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally” (Hofstede, 1997, p. 28). Higher power distance suggests Indians, as opposed to Americans, are more expected to display greater respect for individuals of higher status; power distribution involves fewer individuals in India, and power is more centralized. Based on cultural differences between India and the U.S., and previous studies that show the expression of jealousy can differ across nationalities, the following research question is posed:

RQ2: To what extent will jealousy differ between India and the U.S.?

Religion

In spite of the vast number of studies on jealousy, an extensive review of the literature found only one study directly examining the relationship between religion and jealousy. In a study of sex and emotional reactions to sexual infidelity, Wiederman & LaMar (1998) found religiosity was one of five variables that predicted responses to a jealousy-invoking situation; however, while simultaneously controlling for the other predictors, this relationship disappeared.

One study implied an association between religion and jealousy. Stets and Pirog Good (1987) examined religion as a variable that may introduce stress into a relationship. Although they did not directly examine the relationship between religion and jealousy, they found religious differences and jealousy were both associated with violence inflicted upon women.

Despite the lack of research on jealousy and religion, there is strong theoretical support for such a relationship based on the relationship between religion and infidelity. As Atkins and Kessel (2008) assert, “more religious individuals are less likely to have had affairs compared to the less religious” (p. 407). Burdette, et al. (2007) similarly found evidence of strong links between certain religious practices (church attendance and biblical beliefs) and lower self-reported infidelity. The authors also found substantial denominational variations in the likelihood of marital infidelity. Thus, to further our understanding of how religion may affect the communicative expression of jealousy, the following is put forth:

RQ3: To what extent will religion affect jealousy?

In spite of the controversy regarding the extent of, and reasons for sexual differences in jealousy, much of the research suggests a relationship between an individual’s sex and jealousy. Furthermore, while there have been analyses of jealousy in various nations, there have been no analyses of jealousy in India. Specifically, there have been no cross-cultural comparisons of jealousy between India and the US. The following research question is proposed to ascertain the combined effect of sex, nationality, religion, and relational status on jealousy (whether a person is in a committed relationship or not). Relational status is included because research has demonstrated clear differences in jealousy depending on whether a person has a partner or not:

RQ4: To what extent do sex, nationality, religion, and relational status affect jealousy in India and the U.S.?
Method

Participants and Recruitment Procedures

Participants were recruited in 2009 in the U.S. (1,087) and India (1,111). U.S. participants ranged in age from 18 to 57 ($M = 30.81$, $SD = 9.70$) and Indian participants ranged in age from 18 to 63 ($M = 30.63$, $SD = 9.61$). In the U.S. sample, men accounted for 53.7% of the participants ($N = 584$) and women for 46.3% ($N = 503$). In India, men made up 55% of the sample ($N = 611$) and women were 45% of the sample ($N = 500$). The two samples were relatively equal in the proportion of college students. The Indian sample consisted of 338 college students, 30.4%, while the U.S. sample had 333 college students, or 30.6%. The U.S. sample was overwhelmingly Christian in its religious makeup, with 71.8% self-identified Christians ($N = 781$), 8.9% self-identified Sunni Muslims ($N = 97$), and 19.2% and self-identified Hindus ($N = 209$). The Indian sample was split between 67.1% self-identified Hindus ($N = 746$), and 32.9% self-identified Sunni Muslims ($N = 365$). In the U.S., 203 individuals self-identified as single (18.7%), and 884 as married (81.3%). In India, 319 individuals self-identified as single (28.7%), and 792 as married (71.3%). As for whether an individual was from a rural or urban area, the U.S. sample was split between 52.07% (566) who self-identified as rural and 47.93% (521) who self-identified as urban. In India, 51.3% (570) self-identified as rural and 48.8% (541) self-identified as urban. Sex was a closed-ended option, while age, education, rural/urban location, relational status, and religion were open-ended options.

Upon completion of Human Subjects Review, data were collected through standardized self-administered questionnaires in 2009. Non-college students in the U.S. and India were recruited at various civic organizations, companies, and non-profits in which the principal research had personal/social contacts. In India, participants were recruited from the following states/territory: Andra Pradesh, Gujarat, Harayana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal, and the Capital Territory of New Delhi. U.S. student participants were recruited from various academic departments at two U.S. universities in the Midwest. In many cases, a snowball sampling of participants took place in both settings. Participants in India received financial incentive for participation. Numerous contacts in India asserted minimal financial compensation was necessary for data collection in India as many Indians (in India) are not as accustomed to completing surveys or being part of social scientific/medical studies as Americans are. Many Americans have been approached for such research in college, while many in India are not, so minimal financial incentive was necessary to garner an appropriate sample size. While such a sampling strategy does not involve random probabilistic sampling, it represents a case of “sampling to” as opposed to “sampling from” a population. Sampling to a population represents a hypothetical population, whose nature, can to a certain extent, be understood only based on the socio-demographic characteristics. However, it does represent a larger group to which results may be generalized (DeMaris, 2004).

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1 The U.S. survey contained a question asking individuals the length of time they lived in the U.S., if he/she was not a native-born U.S. citizen. A series of one-way ANOVAs conducted using length of time in the U.S. as the grouping variable and the dimensions of jealousy as the independent variables did not yield significant differences.

2 Follow-up analyses revealed the dimensions of jealousy did not differ based upon geographic location (rural/urban).
Instrument

Surveys were administered in English. As English is one of the many official languages of India, it was determined to use English for the survey. Moreover, as the survey was administered in various Indian states, and as each state generally has different languages, it was deemed best to use one unifying language. Thus, English, not Hindi, was used as many contacts in the organizations where the study took place said English and regional languages were likely to be understood in these contexts.

Multidimensional jealousy scale. Jealousy was measured using Pfeiffer and Wong’s (1989) multidimensional jealousy scale (MJS). This 24-item scale offers separate measurements of an individual’s behavioral, cognitive, and emotional jealousy. The eight behavioral and eight cognitive jealousy items range on a 7-point Likert scale from 1 never to 7 all the time. A sample behavioral item is “I look through X’s drawer’s, handbags or pockets.” A sample cognitive item is “I suspect that X may be attracted to someone else.” The eight emotional jealousy items range on a 7-point Likert scale from 1 very pleased to 7 very upset. A sample emotional item is “X is flirting with someone he/she could be interested in sexually.” Cronbach alphas for these measurements in the 1989 study ranged from .83 to .92. Table 1 illustrates the alphas, means, standard deviations, and correlations for the dimensions of the MJS.

Table 1

<table>
<thead>
<tr>
<th>Means, standard deviations, alphas and correlations for the dimensions of the MJS Scale</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Dimension</th>
<th>N</th>
<th>α</th>
<th>M</th>
<th>SD</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
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<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral</td>
<td>1111</td>
<td>93</td>
<td>5.24</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive</td>
<td>1111</td>
<td>95</td>
<td>3.90</td>
<td>.90</td>
<td>.77**</td>
<td></td>
<td></td>
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<tr>
<td>Emotional</td>
<td>1111</td>
<td>96</td>
<td>4.82</td>
<td>.87</td>
<td>.87**</td>
<td>.89***</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral</td>
<td>1087</td>
<td>95</td>
<td>5.20</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive</td>
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<td>97</td>
<td>3.81</td>
<td>.86</td>
<td>.80**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
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<td>4.74</td>
<td>.85</td>
<td>.87**</td>
<td>.95**</td>
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</table>

Note: **p < .0001.
Analysis and Results

Statistical Analysis
To test the research question, a series of multiple regression models (Pedhazur, 1997) were constructed using each dimension of jealousy as the criterion variable and the following predictor variables: sex, nationality, religion, and the cross-product of nationality and gender, and the cross-products of religion and nationality. Dummy variables were created for sex, nationality, religion, and relational status. Nationality was coded with the U.S. as the reference group (U.S. = 0 and India = 1). Religion was coded with Muslim as the reference group. Sex was coded with male as the reference group (male = 0 and female = 1). Relational status was coded with single as the reference group (single = 0 and married = 1). For each dimension of jealousy, sex, nationality, religion, and relational status were entered in the first model. These variables were entered in the first model as they have each been shown to affect jealousy. In the second model, cross-products were entered to test for potential interaction effects between these biological and cultural factors.

Research Questions
Behavioral jealousy. The research questions were tested through the use of a series of multiple regressions. The regression results are presented in Table 2-4. The dimensions of jealousy (behavioral, cognitive and emotional) are the criterion variables in all analyses. The linear combination of sex, nation, religion, and relational status was significantly related to behavioral jealousy: $F(5, 2192) = 31.35$, $p < .0001$. The $R$ was .26, meaning 7% of the variance in an individual’s behavioral jealousy could be accounted for by these variables. Based on this regression, males display less jealousy than females ($\beta = .18$), Christians display more jealousy than Muslims ($\beta = .13$), Hindu ($\beta = .19$) display more jealousy than Muslims, and married people display less behavioral jealousy than single people ($\beta = -.11$).

Table 2
Summary of Regression Analysis for Variables Predicting Behavioral Jealousy

<table>
<thead>
<tr>
<th>Regressor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$\beta$</th>
<th>$t$</th>
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<tbody>
<tr>
<td>Intercept</td>
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<tr>
<td>Male</td>
<td>.24</td>
<td>.03</td>
<td>.18**</td>
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<td>India</td>
<td>-.04</td>
<td>.04</td>
<td>-.03</td>
<td>-.98</td>
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<td>Christian</td>
<td>.19</td>
<td>.05</td>
<td>.13**</td>
<td>3.70</td>
</tr>
<tr>
<td>Hindu</td>
<td>.25</td>
<td>.04</td>
<td>.19**</td>
<td>6.80</td>
</tr>
<tr>
<td>Married</td>
<td>-.18</td>
<td>.03</td>
<td>-.11**</td>
<td>-5.47</td>
</tr>
<tr>
<td>$F$</td>
<td></td>
<td></td>
<td></td>
<td>31.35</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td></td>
<td></td>
<td>.07</td>
</tr>
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Cognitive jealousy. The linear combination of sex, nation, religion, and relational status was significantly related to cognitive jealousy: \( F(5, 2192) = 38.79, \ p < .0001 \). The \( R \) was .29, meaning 8\% of the variance in cognitive jealousy could be accounted for by these variables. Based on this regression, Indians display more cognitive jealousy than Americans (\( \beta = -.07 \)), Christians (\( \beta = .26 \)) and Hindus (\( \beta = .35 \)) both display more than Muslims, and married individuals display less (\( \beta = -.08 \)) than single people.

Table 3

Summary of Regression Analysis for Variables Predicting Cognitive Jealousy

<table>
<thead>
<tr>
<th>Regressor</th>
<th>( b )</th>
<th>( SE )</th>
<th>( \beta )</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.04</td>
<td>.04</td>
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<tr>
<td>India</td>
<td>-.13</td>
<td>.06</td>
<td>-.07*</td>
<td>-2.32</td>
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<tr>
<td>Christian</td>
<td>.49</td>
<td>.07</td>
<td>.26**</td>
<td>7.38</td>
</tr>
<tr>
<td>Hindu</td>
<td>.62</td>
<td>.05</td>
<td>.35**</td>
<td>12.93</td>
</tr>
<tr>
<td>Married</td>
<td>-.16</td>
<td>.04</td>
<td>-.08**</td>
<td>-3.82</td>
</tr>
</tbody>
</table>

\[ F = 38.79 \]

\[ R^2 = .08 \]

\[ R^2_{adj} = .08 \]

Note: * \( p < .05 \), ** \( p < .0001 \).

Emotional jealousy. The linear combination of sex, nation, religion, and relational status was significantly related to cognitive jealousy: \( F(5, 2192) = 31.30, \ p < .0001 \). The \( R \) was .26, meaning 7\% of the variance in emotional jealousy could be accounted for by these variables. Based on this regression, males display less jealousy than females (\( \beta = -.08 \)), Christians (\( \beta = .21 \)) and Hindus (\( \beta = .28 \)) both display more emotional jealousy than Muslims, and married individuals display less (\( \beta = -.13 \)) than single people.
Table 4

**Summary of Regression Analysis for Variables Predicting Emotional Jealousy**

<table>
<thead>
<tr>
<th>Regressor</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.62</td>
<td>.05</td>
<td>89.23</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>.14</td>
<td>.04</td>
<td>.08**</td>
<td>3.79</td>
</tr>
<tr>
<td>India</td>
<td>-.10</td>
<td>.05</td>
<td>-.06</td>
<td>-1.79</td>
</tr>
<tr>
<td>Christian</td>
<td>.37</td>
<td>.07</td>
<td>.21**</td>
<td>5.79</td>
</tr>
<tr>
<td>Hindu</td>
<td>.47</td>
<td>.05</td>
<td>.27**</td>
<td>9.93</td>
</tr>
<tr>
<td>Married</td>
<td>-.25</td>
<td>.04</td>
<td>-.13**</td>
<td>-6.00</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td>31.30</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>R² adj</td>
<td></td>
<td></td>
<td>0.07</td>
<td></td>
</tr>
</tbody>
</table>

*Note: * p < .05, ** p < .0001.

**Discussion**

**Findings**

Women reported higher levels of jealousy than men on two dimensions (emotional and behavioral). Hindus and Christians were higher than Muslims on all three dimensions. Indians reported higher cognitive jealousy than Americans. Married individuals reported lower levels of jealousy than single individuals on all three dimensions of jealousy. Collectively, the results are consistent with previous research that reveals variance in jealousy due to sexual differences, and add to previous research by finding variance in jealousy due to religion and relational status. Moreover, these results indicate biology and social context contribute to jealousy. This is evident with the religious, sexual, and national differences.

**Religious differences**

Christians and Hindus reported higher levels of behavioral, cognitive, and emotional jealousy than Muslims. Based on previous research finding sexual jealousy to be more prevalent in patriarchal cultures (Hupka & Ryan, 1990), we might have expected Muslims to report higher levels of jealousy than Hindus and Christians, due to patriarchal tendencies within Islam (Croucher, 2008). However, an alternative explanation might be found in the religious norms of Islam. In traditional Islam, there are such strong religious norms against infidelity that Muslims feel more secure in their relationships and experience fewer jealous feelings, thoughts, and behaviors. In comparison, perhaps Christians and Hindus lack strong religious norms against infidelity, and thus are more likely to experience jealous feelings and/or thoughts – yet their religious norms do constrain their behavioral expression of jealousy similar to that of Muslims.
Another possible explanation is because of religious norms; part of Muslim religious identity is one of fidelity between men and women. As jealousy implies possible infidelity, perhaps Muslims view jealousy as more undesirable and threatening to or incompatible with their religious identity than do Christians and Hindus. Therefore, Muslims may be less likely to admit to experiencing jealous feelings, thoughts or behaviors – even to themselves, much less likely to a researcher. Finally, as Muslims comprise a minority in both India and the United States, they could have believed their responses would be more socially acceptable if they reported lower levels of jealousy. Participant answers may reflect a social desirability bias, if they tried to answer survey questions presenting themselves in a positive light. Additional research, perhaps using qualitative methods, should provide more insight into the reasons for religious differences in jealousy.

Sexual Differences

Consistent differences appeared between males and females in this study, with females in India and the U.S. reporting higher behavioral and emotional jealousy than males, lending support to biological differences in jealousy. This finding challenges Harris’s (2003a) review that raised doubts about the existence of sexual differences in jealousy. Though sexual differences found in the present study support the view of jealousy as a function of biology, the findings neither confirm nor disconfirm the evolutionary psychological perspective, as the present study did not directly compare the sexes on jealousy related to sexual and emotional infidelity.

Relational Differences

Previous research has shown married people are more likely to demonstrate jealousy than single people (Pines & Aronson, 1983; White & Mullen, 1989). In the current study married individuals scored lower on all dimensions of jealousy. Individuals in a committed relationship may have more trust in their partner, while single people may be more likely to not have this kind of trust in a person they have yet to meet. Thus, committed partners may be less likely to fear a third-party at the cognitive, behavioral, and emotional level when in a real relationship, and not when trying to imagine the relationship and such a threat.

Integration of Biology and Social Context Perspectives

There is an on-going debate in literature between scholars who espouse the social-cognitive framework and those who espouse the evolutionary psychology framework. (e.g., DeSteno, Bartlett, & Salovey, 2006; Harris, 2003b; Nannini & Meyers, 2000; Sagarin, 2005; Ward & Voracek, 2000). The evolutionary perspective asserts sexual differences in jealousy are best explained by biological mechanisms (Buss & Haselton, 2005); the social-cognitive perspective asserts such differences are best explained by the social context (Ellis & Weinstein, 1986; Harris, 2003a). According to Harris (2003a), the most distinctive contrast between these two perspectives is that the social-cognitive framework, unlike the evolutionary framework, provides a way for cultural values and feelings about the self to explain jealousy. More recently, scholars have suggested elements of both theories might be integrated to better understand jealousy (Maner, Miller, Rouby & Gailliot, 2009; Penke & Asendorpf, 2008).

Results from the present study support an integration of these theoretical perspectives, by incorporating biological and social variables into the same study (sex, religion, nation, and relational status). The combination of these variables yielded significant findings regarding the affects of each variable on the dimensions of jealousy, and also demonstrated how combining these variables predict each dimension of jealousy. This sampling of variables further
demonstrates the intricate relationships between the biological (sex) and the sociological (religion, relational status, and nation) perspectives.

**Limitations and Future Directions**

The primary limitations to this study involve representations of religious groups and administration of an English-only survey. The U.S. sample was overwhelmingly Christian, and lacked religious diversity. Future work should sample a more heterogeneous group of religions in the U.S. The second limitation was using English as the only language for the survey in India. While English is one of the official languages of India, its use could be a limitation as there may be varying degrees of comprehension or interpretation among respondents. Future studies could administer the survey in Hindi and regional/local languages. Future studies could also consider the effect of an individual’s strength of religious identification or religiousness/religiosity (Alston, 1975; Shafranske & Malony, 1990) on jealousy. Along with an individual’s religious identification, strength of identification has been found to have a significant effect on an individual’s actions (Blaine, Trivedi, & Eshelman, 1998; Croucher, et al., 2008; Fuller, 2006; Stewart & Roach 1993), and could affect their level of jealousy.

The findings of this study extend our understanding of jealousy in India and the U.S. Findings revealed women to report higher levels of jealousy than men. More work should be done examining the relationship between sex and jealousy in cross-cultural environments. Christians and Hindus reported higher levels of jealousy than Muslims; this finding warrants further investigation. Clearly, more studies need to be conducted to fully understand how biology and culture, including national and religious identity, affect the feeling and expression of jealousy.
References


