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Cognitive Frameworks of Virginity and First Intercourse

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Research has begun to examine the subjective meanings of virginity and first coitus, but little is known about how these understandings influence the first sexual intercourse event. The purpose of this study was to investigate the relationship between virginity scripts and the approach taken and decisions made during first coitus. A quantitative measure of virginity interpretations (as gift, stigma, or process) was developed based on Carpenter's (2001, 2005) qualitative interviews. Participants were university students (184 women and 31 men), all of whom had experienced consensual first penile–vaginal intercourse. Participants completed a quantitative questionnaire in the lab. Fifty-four percent of participants classified themselves as process oriented, 37.7% as gift oriented, and 8.4% as stigma oriented at the time of first coitus. The virginity scripts or frameworks were found to be related to age at first coitus, partner choice, length of relationship with first partner, planning, affective reaction to first coitus, and perceived impact on life. Virginity frameworks were unrelated to contraceptive use at first coitus. Results from this study suggest that Carpenter's virginity frameworks can be successfully translated into quantitative measures that support links between how individuals interpret their virginity and the decisions they make at first coitus.

Historically, the demarcation between the categories of *virgin* and *non-virgin* has been the first time penile–vaginal intercourse occurs. Even today, the majority of young people still understand virginity loss in terms of heterosexual intercourse (Bersamin, Fisher, Walker, Hill, & Grube, 2007; Trotter & Alderson, 2007), although there is now somewhat greater variability in the sexual behaviors included (Carpenter, 2001). The cultural significance of first intercourse is considerable, including a transition into adulthood, a loss of sexual innocence, and, in some cases, an association with marital status. Given the significance of virginity and virginity loss in North America, how individuals think and feel about their virginity status should be closely connected to how they behave sexually in their first encounter. This study examined the relationship between cognitive representations of virginity (i.e., virginity frameworks) and individuals' first consensual coital experience. Although a number of studies have explored first intercourse, few have examined the connection between the subjective meanings of virginity and the first sexual intercourse experience. This connection could help us better understand differences in first intercourse behaviors and possible associations with specific risk behaviors.

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Virginity Frameworks

Laura Carpenter (2001, 2002, 2005) was the first to delineate the cultural scripts that embody the North American perception of virginity. Carpenter (2001) conducted qualitative, in-depth interviews with a heterogeneous sample of 61 respondents, ages 18 to 35, about the varied meanings of virginity and virginity loss. Three[1] cognitive frameworks, or what could be considered dominant cultural scripts, were synthesized from the interviews. Virginity was understood as a gift, a stigma, or a process. These frameworks aid individuals in shaping and defining their sexual identities as they navigate their way through their sexual debuts (Carpenter, 2001; Gagnon & Simon, 1973). The gift frame describes individuals who are comfortable, or even proud, of their virginity both personally and socially. The status of virgin is valuable and, as such, requires the respect and mutual understanding of a committed intimate partner—someone who is loved and can, ideally, reciprocate the gift. Finding the "right" person is very important because the act of

[1]In her book, Carpenter (2005) makes reference to a fourth framework, "an act of worship," which captures the views of a small minority of individuals, typically born-again Christians, who believe in abstinence until marriage. This framework was not incorporated in this study because national data indicate very low levels of religiosity among Canadian youth (Statistics Canada, 2006), and my own data suggests negligible religiosity among university students at this university (Humphreys, 2012).

sharing the gift has to be special. In contrast, the stigma frame characterizes individuals who are ashamed of their virginity status, perceiving it as burdensome and embarrassing. Individuals do not socially acknowledge their virginity; in fact, they actively hide it. At the most readily available opportunity, stigma-oriented individuals would like to free themselves from this burden. Given the emphasis on getting rid of one's virginity status as soon as possible, love or the "right" time, place, and partner are not as critical. Obtaining the non-virgin status is the goal for stigma-oriented individuals. Physical pleasure also features more prominently as an outcome for stigma (and process) than gift-oriented individuals. The process frame characterizes individuals who perceive their virginity as an inevitable stage of life necessary for the transition from youth to adulthood. Like other rites of passage, individuals learn new ways of connecting and communicating with the world around them. Process-oriented individuals believe that first intercourse represents an opportunity to gain sexual knowledge about oneself, one's partner, and sexuality more generally.

In identifying these frameworks, Carpenter (2001, 2005) also highlighted gender differences that typified the sexual double standard. For example, young men were found to respond to first sex in a more positive manner, viewing their experiences as empowering. Young women, on the other hand, were found to be more concerned with managing the loss of their virginity. This information supports the notion that women are more likely to view their virginity as a gift—as something they consider precious and valuable; and young men are empowered by shedding the undesirable state of virgin. The gendered nature of virginity has also been discussed by Holland, Ramazanoglu, Sharpe, and Thomson (2000), who highlighted first heterosexual intercourse as an empowering moment for young men that confirms their identity, whereas this same moment for young women is more ambivalent and carefully managed.

Carpenter's (2001) qualitative interviews were also suggestive of links between the metaphors people used to understand their virginity and behavioral approaches to first sexual intercourse. Stigma-oriented individuals talked about choosing friends or strangers as first sexual partners, and engaging in less communication or planning prior to the sexual experience (Carpenter, 2001). In contrast, gift-oriented individuals, proud of their virginity, engaged in higher levels of sexual communication and planning, and reported more positive first experiences. Further, gift-oriented individuals were thought to be guided by feelings of positive affect, love, and commitment. Thus, it is evident that subjective interpretations of one's virginity may produce differences in the ways in which individuals go about their first sexual experiences. If cognitive frameworks for understanding or interpreting virginity status influence the actual timing of sexual debut, as well as levels of sexual communication, decision-making, planning, and satisfaction before, during, and after first intercourse, it is important to quantitatively measure these associations.

Age of Self and Partner at First Intercourse

Much of the research conducted on age of first intercourse focuses on the links between age and negative outcomes. Early sexual debut has been linked with numerous sexual risk factors, such as unplanned pregnancies, sexual coercion, sexually transmitted infections (STIs; Ryan, Manlove, & Franzetta, 2003), engaging in recent intercourse while intoxicated, and having a greater number of sexual partners (Sandfort, Orr, Hirsch, & Santelli, 2008). Engaging in intercourse at a younger age has also been linked with an increase in delinquency (Armour & Haynie, 2007) and poorer school performance (Laflin, Wang, & Barry, 2008). Given the risks associated with early sexual intercourse, it is interesting to know whether cognitive frameworks may also influence the age of first sexual intercourse. The most logical associations between age of sexual intercourse debut and virginity frameworks are with stigma and gift. Given the rush to rid themselves of their virginity status, it makes intuitive sense that stigma-oriented individuals may be the youngest at first intercourse. Gift-oriented individuals, with their planning and partner testing, may take longer and, therefore, be relatively older when they debut; however, the reverse might also be true. It is possible that individuals only feel the stigma orientation because their sexual debut has not occurred at a time consistent with their peers. If they feel that sexual intercourse should have taken place already and has not, a stigma orientation develops. This could mean that stigma-oriented individuals are, on average, older at first intercourse relative to their counterparts. In addition, the romanticism and love associated with gift frameworks may induce many to feel the time is right earlier than the other frameworks. The age of first intercourse of those with a process framework is likely to fall between stigma and gift, given their more neutral approaches to intercourse.

This study also sought to understand the association between virginity frameworks and age differences among partners. Although no specific prediction was made regarding age differences, virginity frameworks may be linked to age differences between partners. Individuals who view their virginity as a stigma, for example, may seek younger, less experienced partners in an attempt to avoid embarrassment arising from their own lack of experience. Gift-oriented individuals may be less likely to have first sexual intercourse with someone who is substantially different in age, given their emphasis on choosing a partner very carefully and their desire to share their gift with someone who can reciprocate. The implications of age differences are important because past research has linked specific patterns of age differences (younger

female/older male) with risky sexual behaviors (e.g., failure to use contraception; Gowen, Feldman, Diaz, & Yisrael, 2004; Mercer et al., 2006; Young & d'Arcy, 2005).

First Intercourse, Preparation, and Contraception

The ineffective use or non-use of contraceptives at first intercourse is an ongoing concern. Data from a number of developed countries, including Canada and the United States, suggest that approximately 20% of adolescents fail to use any type of contraception at first intercourse (Grunseit, 2004; Manlove, Ryan, & Franzetta, 2003; Rolston, Schubotz, & Simpson, 2004; Tsui & Nicoladis, 2004). Although many young women report desires to avoid pregnancy, many still engage in unprotected sexual intercourse (Bartz, Shew, Ofner, & Fortenberry, 2007). First sexual encounters that are planned tend to incorporate contraceptives more often (McLean & Flanigan, 1993). Data from the U.S. National Longitudinal Study on Adolescent Health suggest that adolescents who waited longer between the start of a relationship and first sex with that partner were involved in more intimate/romantic relationships or discussed contraceptive options before having sex, increased their chances of using contraceptives, or being consistent with their contraception (Manlove et al., 2003; Ryan, Franzetta, Manlove, & Holcombe, 2007). In fact, engaging in preparatory safer sex behaviors, such as discussing contraception and obtaining condoms, plays a strong role for both women and men, mediating between the intent to use condoms and actual use (Bryan, Fisher, & Fisher, 2002). Although adolescents typically do not feel comfortable discussing protection with their partners, those who do engage in these discussions reported better contraceptive use (Widman, Welsh, McNulty, & Little, 2006). Planning behaviors were also mentioned more frequently by gift-oriented individuals (in comparison to stigma- and process-oriented individuals) in Carpenter's (2001, 2005) qualitative interviews. Because gift-oriented individuals are testing the commitment of their partners through an incremental approach to sexual intimacy, they often end up taking more time between the start of their relationship and first intercourse. The intimacy that develops affords them the time to discuss and prepare for their first time. Those reporting more satisfaction in their relationship reported being more likely to have these discussions with their partners (Widman et al., 2006). As a consequence, they may be more likely to also practice safer sex at first intercourse.

In contrast, stigma-oriented individuals are eager for the first opportunity to lose their virginity. If waiting is not an option, then strangers, friends, or dating partners are equally likely intercourse candidates. Given the desire to keep their status a secret and the rush to "get it over with," safer sex planning and discussions are less likely. More spontaneous first intercourse encounters tend to be characterized by silence (Mitchell & Wellings, 1998). Carpenter (2005) suggested that 40% of those she identified as having a stigma framework practiced no pregnancy or STI prevention at all.

First Intercourse and Affect

Affective reactions to first sexual intercourse can influence subsequent sexual feelings about oneself and sexual behaviors with others. Adolescents tend to show moderate levels of ambivalence in the decision to have their first sexual intercourse (Tanner, Hensel, & Fortenberry, 2010); however, actual first intercourse events experienced as negative have been associated with less interest in sexual activity, as well as lower use of contraception and protection (Gerrard, Gibbons, & McCoy, 1993). Positive experiences have been associated with greater happiness, well-being, fewer occurrences of negative emotions (Schrier, Mei-Chiung, Hacker, & de Moor, 2007), a more intentional (vs. spontaneous) first experience, and greater body satisfaction (Smiler, Ward, Caruthers, & Merriwether, 2005). In line with sexual double standards, women's descriptions of first intercourse are generally less positive than men's, regardless of whether the study uses the attitudes of virgin adolescents (Cuffee, Hallfors, & Waller, 2007) or the retrospective accounts of college students (Pinquart, 2010). Carpenter's (2002) gift-oriented individuals are more likely to plan their first intercourse and associate it with feelings of love; and, as such, they might, on average, be more positive about the event. It is more difficult to know how stigma- or process-oriented individuals may feel about their first time. Stigma-oriented individuals may feel happier about "getting it over with" than the actual event itself and, therefore, have more flat affect, whereas process-oriented individuals may again have both positive and negative feelings, but not feel them as intently.

This Study

Given the potential impact that different understandings of virginity may have in shaping individuals' first sexual intercourse experiences, a failure to account for these differences is problematic. Carpenter's (2001) virginity frameworks represent a new set of scripts that can be utilized to comprehend how thoughts about virginity can influence the decisions made about sexual intercourse debut. Thus, this study utilized the constructs of virginity, as proposed by Carpenter (2001), yet sought to quantify the relationship between cognitive frameworks of virginity and the experience of first sexual intercourse. Quantifying the narratives produced by Carpenter (2001) facilitates an examination of the associations between the cognitive frameworks and the sexual behaviors thought to be linked to each, including partner choice, sexual communication and planning,

safer sex practices, affective reactions, and perceived impact on life. In line with Carpenter's (2001, 2005) three primary interpretations of virginity as gift, stigma, or process, the following hypotheses were suggested (note that an hypothesis was not proposed for contraceptive use given that competing possibilities are likely for both gift- and stigma-oriented individuals):

H1: Given that gift-oriented individuals value and place high importance on their virginity and stigma-oriented individuals are wanting to unburden themselves of their virginity status as soon as they can, gift-oriented individuals are more likely (than stigma-oriented individuals) to report that the nature of the relationship with their first partner was more intimate, and are more likely to be in a relationship with their first partner for a longer period of time both prior to and following first intercourse.

H2: Process- and gift-oriented individuals will have higher levels of communication and planning prior to first coital experiences (FCEs) than stigma-oriented individuals.

H3: Gift-oriented individuals, in comparison to stigma-oriented individuals, will have higher levels of positive affect about their first coital event, given the planning and greater romance connected to the event.

H4: Stigma-oriented individuals will report that their FCE had less of a positive impact on their lives than gift- or process-oriented individuals. Stigma-oriented individuals are typically motivated to get rid of their virginity, instead of make the event special or learn from it. As such, it is likely that the event itself holds less importance for these individuals.

Method

Participants

A total of 226 students from an undergraduate introductory psychology course at a small university in Ontario, Canada participated in the study. Three participants were removed because they had not had coitus yet. One participant was removed because she described her first experience as rape. Inclusion criteria for the study required that individuals' first times had already occurred and that it was consensual. To keep the sample representative of an undergraduate population and reduce memory bias, individuals older than 30 years of age were also removed ($n = 7$). The remaining 215 participants (184 women and 31 men) were retained for the analyses. *Sexual intercourse* was defined for all participants as penile–vaginal intercourse. Given that an individual does not have to be heterosexual to have experienced penile–vaginal intercourse, the study was open to all sexual orientations. Two hundred-seven self-identified as heterosexual, one as lesbian, six as bisexual, and one failed to provide this information. The majority were in their first year of university (86.5%) and taking either a Bachelor of Arts (65.1%) or a Bachelor of Science (19.5%) degree. The mean age of the sample was 19.7 years ($SD = 2.3$, $Mdn = 19$). The average number of reported lifetime intercourse partners was 4.4 ($SD = 4.9$). Ethnicity data were not collected; however, the university is predominantly Caucasian.

Measures

Each participant received a questionnaire package consisting of demographics (gender, age, degree program, year of university, sexual orientation, experience with sexual intercourse, number of sexual intercourse partners, and religious practice), descriptive information regarding their first intercourse experience, virginity framework descriptions, the Communication and Planning Scale (CPS), the First Coital Affective Reaction Scale (FCARS), and the Impact on Life Scale (ILS).

First intercourse. A series of questions asked participants to describe their first sexual intercourse experiences, including their age at FCE, the age of partner, nature of relationship with partner (i.e., romantic/lover, friend/companion, or stranger/acquaintance), feelings for partner at FCE (i.e., love, liking, friendship, indifference, or dislike), length of time dating before and after FCE, and the type of contraception used. *First sexual intercourse* was defined for participants as "the first time you voluntarily engaged in penile–vaginal penetration."

Virginity frameworks. Three paragraphs were developed based on Carpenter's (2001, 2002) descriptions of the three distinct interpretational frames for FCE: gift, stigma, and process. Using a forced-choice format, participants were asked to read all three descriptions and indicate which one they most closely identified with. The three cognitive frameworks were described as follows:

Gift: "I saw my virginity as something special, cherished and guarded. I believed it to be a gift that I would give to someone I loved and someone who would love me back, someone who would appreciate receiving a gift of virginity. I was proud of my virginity."

Stigma: "I saw my virginity as a label which I was ready to get rid of, something negative and unwanted. I was embarrassed by my virginity status and did not want anyone to know about it, sometimes I felt like hiding it and lying about it."

Process: "I thought of my virginity as a stepping stone or rite of passage that everyone must go through; the starting of a process of sexuality, which was natural and would continue to evolve. I saw virginity as something that would disappear as I grew up and into an adult."

This was followed by asking participants to rate, on a scale ranging from 0% (*not at all confident*) to 100% (*very confident*), how confident they were with their choice.

CPS. The amount of communication and planning regarding FCE prior to first coitus was measured using the CPS, which was developed for use in this study. Communication with partners, parents, and health care professionals were addressed. The CPS consists of 13 items assessed on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items include, "I spoke openly with my intercourse partner about my virginity status," "I spoke to my doctor/health care professional about safer sex practices and contraceptives," and "I planned my first intercourse experience in some detail." Scores are equal to the mean of the 13 items, with higher scores representing more communication and planning of the first sexual intercourse event. Principal components analysis on this scale using varimax rotation revealed a single factor accounting for 36.7% of the variance and an overall internal consistency of .85.

FCARS. The FCARS assesses respondents' reported affective reactions to their FCE at the time that it occurred (Schwartz, 1993, 1998). The FCARS consists of 13 bipolar items measured using a 7-point Likert-type scale ranging from 1 (*not experiencing the feeling at all*) to 7 (*strongly experiencing the feeling*). The 13 items are *confused, satisfied, anxious, guilty, romantic, pleasure, sorry, relieved, exploited, happy, embarrassed, excited,* and *fearful.* The negative emotion items are reverse-scored so that in all items a score of 1 represents a negative response and 7 represents a positive response. Therefore, when totalled, larger scores represent greater positive affect. Schwartz (1993) reported an internal consistency using a U.S. sample of .89 and a Swedish sample of .85. This sample has an internal consistency of .89. Face and construct validity have also been established (Schwartz, 1993).

ILS. The ILS measures the perceived impact of first sexual intercourse on one's life, such as improvements in sexual knowledge, comfort, and dyadic intimacy. The measure was developed for use in this study. Factors examined include awareness of STIs, confidence in sexuality, comfort with one's body, and self-concept. The scale consists of 12 items measured using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items include, "I became more comfortable with my body," "My understanding of contraceptives improved," and "My relationship with my first partner became more committed." Scores are equal to the mean of the 12 items, with higher scores representing greater perceived improvements with different aspects of one's sexual life after first intercourse. Principal components analysis on this scale using varimax rotation revealed a four-factor solution accounting for 81.7% of the variance, with an overall internal consistency of .87. The four factors are as follows: relationship dynamics (i.e., intimacy, trust, and commitment; $\alpha = .95$), self-improvement (self-concept, confidence, esteem, and comfort; $\alpha = .89$), knowledge (i.e., STIs, contraceptives, and safer sex; $\alpha = .81$), and parents (i.e., treatment and communication; $\alpha = .88$).

Procedure

Students from the introductory psychology course have access to active research studies through the department's computerized research management system. Participants voluntarily signed up for convenient time slots to come into the laboratory and complete this survey. Potential participants were informed that the study was examining first consensual sexual intercourse experiences. The consent form indicated that all responses would remain anonymous and confidential, and that participants were able to omit any items they did not feel comfortable providing. Up to five participants could complete the questionnaire simultaneously in private cubicles. Upon completion, participants sealed their questionnaires in the envelope provided before returning it to the researcher. Participants were provided with a written debriefing that listed counselling services on campus in the event that participants had any residual feelings they wished to discuss with someone. The questionnaire took approximately 30 to 45 minutes to complete. Students received extra credit toward their introductory psychology class for participating. The study was approved by the research ethics board at the university.

Results

First Intercourse Characteristics

The average age of first intercourse in the sample was 16.30 years ($SD = 1.57$, $Mdn = 16.0$); however, men ($M = 16.87$ years) reported an older age at first intercourse than women ($M = 16.25$ years), $t(211) = 2.06$, $p = .04$. Partners' mean age of first intercourse was 17.50 ($SD = 2.15$). It was also the partners' first sexual intercourse experiences for 44.2% of the sample. The majority of the sample (74.9%) categorized the nature of their relationship as "romantic/lover," whereas 60.5% felt that they "loved" their partners at the time. Participants reported that they were involved with their partners for an average of 3.65 (where 3 = 1–3 months and 4 = 4–6 months). Relationships lasted an average of 4.10 (where 4 = 4–6 months) after first intercourse. Seventy-eight percent of participants reported that they desired intercourse with their partner again after the first time. In terms of contraceptive use during first intercourse, 43.3% used condoms only, 5.6% used oral contraception only, 39.5% used dual protection (mainly condoms plus oral contraception, but some condoms plus withdrawal or oral contraception plus withdrawal), and 11.1% used withdrawal only or no method at all (see Table 1).

Virginity Frameworks

Table 1 shows the breakdown of the self-identified virginity framework overall and by gender. Chi-square analysis revealed a significant difference between women and men in their virginity frameworks. Approximately one-half of each gender classified themselves as process oriented; however, men were more likely to classify themselves as stigma oriented, and women were more likely to categorize themselves as gift oriented, $\chi^2(2, N = 215) = 27.39, p < .001$. Carpenter's (2002) qualitative results suggested that about one-third of her interviewees described themselves in each of the three frameworks at the time of virginity loss. In this study, more individuals tended to perceive their virginity as process oriented, rather than stigma or gift oriented. Overall, participants indicated that they were very confident in choosing the framework they identified with. The mean confidence rating was 8.25 out of 10.00. Although confidence was high, there was a significant difference between the frameworks $F(2, 196) = 10.48, p < .001$. Gift-oriented individuals (8.96) were significantly more confident than stigma- (7.62) and process-oriented (7.86) individuals.

Given that gender was significantly related to virginity frameworks, analyses of covariance (ANCOVAs) were used to covary out the influence of gender when assessing virginity frameworks against other variables of interest. Table 2 shows the breakdown of the self-identified virginity frameworks. Age of first intercourse did significantly differ by virginity framework, $F(2, 213) = 5.98$, $p = .003$. Tukey's honestly significant difference (HSD) *post hoc* test revealed that, on average, process-oriented

Table 1. *Descriptive Statistics by Gender*

	Total		Women		Men	
Variable	***n***	**%**	***n***	**%**	***n***	**%**
Virginity framework						
Gift	81	37.7	74	40.2	7	22.6*
Stigma	18	8.4	8	4.3	10	32.3
Process	116	54.0	102	55.4	14	45.2
Partner's first time?						
Yes	95	44.2	86	46.7	9	29.0
No	110	51.2	91	49.5	19	61.3
Do not know	10	4.7	7	3.8	3	9.7
Nature of relationship						
Romantic/lover	161	74.9	144	78.3	17	54.8*
Friend/companion	37	17.2	29	15.8	8	25.8
Stranger/acquaintance	17	7.9	11	6.0	6	19.4
Feelings for partner						
Love	133	61.9	123	66.8	10	32.3*
Liking	61	28.4	48	26.1	13	41.9
Friendship	4	1.9	2	1.1	2	6.5
Indifference	13	6.0	8	4.3	5	16.1
Dislike	3	1.4	2	1.1	1	3.2
Contraceptive use						
Condom only	93	43.3	78	42.4	15	48.4
Hormonal method only	13	6.1	9	7.8	4	12.9
Dual protection	85	39.5	75	40.8	10	32.3
Withdrawal/none used	24	11.1	22	12.0	2	6.4

	Total		Women		Men	
	M	***SD***	***M***	***SD***	***M***	***SD***
Confidence with framework	8.25	1.78	8.18	1.81	8.65	1.55
Age of first intercourse	16.34	1.57	16.25	1.57	16.87	1.45*
Age of partner at first intercourse	17.49	2.15	17.48	2.10	17.55	2.43
Length of relationship prior to FCE[a]	3.65	1.23	3.79	1.16	2.81	1.33*
Length of relationship after FCE[b]	4.10	1.70	4.22	1.67	3.42	1.62*
First Coital Affective Reaction Scale	4.57	1.27	4.49	1.25	5.04	1.31*
Impact on Life Scale	4.70	1.10	4.72	1.10	4.54	1.13

Note. $N = 215$. FCE = first coital experience.

[a]Length of relationship prior to FCE is an ordinal measure where 1 = hours/days, 2 = 1–3 weeks, 3 = 1–3 months, 4 = 4–6 months, and 5 = 7+ months.

[b]Length of relationship after FCE is an ordinal measure where 1 = hours/days, 2 = 1–3 weeks, 3 = 1–3 months, 4 = 4–6 months, 5 = 7+ months, and 6 = still together.

*$p < .05$.

Table 2. *Descriptive Statistics by Virginity Framework*

	Gift		Stigma		Process	
Variable	***n***	**%**	***n***	**%**	***n***	**%**
Partner's first time?						
Yes	40	49.4	4	22.2	51	44.0*
No	40	49.4	11	61.1	59	50.9
Do not know	1	1.2	3	16.7	6	5.2
Nature of relationship						
Romantic/lover	73	90.1	7	38.9	81	69.8*
Friend/companion	7	8.6	6	33.3	24	20.7
Stranger/acquaintance	1	1.2	5	27.8	11	9.5
Feeling for partner						
Love	72	88.9	2	11.1	59	50.9*
Liking	6	7.4	10	55.6	45	38.8
Friendship	2	2.5	1	5.6	1	0.9
Indifference	1	1.2	4	22.2	8	6.9
Dislike	0	0	1	5.6	2	1.7
Contraceptive use at FCE						
Condom only	33	40.7	10	55.6	50	43.1
Hormonal method only	5	6.2	1	5.6	6	6.1
Dual protection	32	39.5	5	27.8	48	41.4
Withdrawal/none used	11	13.5	2	11.2	11	9.5

	Gift		Stigma		Process	
	M	***SD***	***M***	***SD***	***M***	***SD***
Confidence with framework	8.96	1.00	7.62	2.70	7.86	1.87*
Age of first intercourse	16.70	1.45	16.94	1.95	15.99	1.49*
Age of partner at first intercourse	17.60	2.10	18.17	3.07	17.31	1.99
Number of lifetime intercourse partners	2.31	2.79	7.50	9.01	5.40	4.68*
Length of relationship prior to FCE[a]	4.06	0.93	2.39	1.34	3.56	1.26*
Length of relationship after FCE[a]	5.00	1.28	2.78	1.52	3.65	1.69*
Communication and Planning Scale	4.63	1.11	2.94	0.99	3.98	1.13*
First Coital Affective Reaction Scale	4.74	1.23	4.82	1.20	4.40	1.29
Impact on Life Scale	5.11	0.91	4.27	1.06	4.47	1.15*

Note. $N = 215$. FCE = first coital experience.
[a]Length of relationship prior to FCE is an ordinal measure where 1 = hours/days, 2 = 1–3 weeks, 3 = 1–3 months, 4 = 4–6 months, and 5 = 7+ months.
[b]Length of relationship after FCE is an ordinal measure where 1 = hours/days, 2 = 1–3 weeks, 3 = 1–3 months, 4 = 4–6 months, 5 = 7+ months, and 6 = still together.
*$p < .05$.

individuals ($M = 15.99$ years) engaged in first intercourse earlier than stigma- ($M = 16.94$ years) and gift-oriented ($M = 16.70$) individuals. No difference was found in partners' ages of first intercourse across virginity frames. Age of first intercourse and partners' age of first intercourse were highly correlated for all three virginity frames: process ($r = .730$, $p < .001$), stigma ($r = .531$, $p = .024$), and gift ($r = .494$, $p < .001$). Participants were also found to differ in terms of their lifetime number of partners based on their self-identified virginity frame classification, $F(2, 213) = 13.04$, $p < .001$. Tukey's HSD post hoc test showed that those identifying as gift oriented had significantly fewer lifetime sexual intercourse partners ($M = 2.31$) compared to stigma- ($M = 7.50$) and process-oriented ($M = 5.40$) individuals.

When asked whether participants thought that their first intercourse experience was also their partners', the responses differed by virginity frame: $\chi^2(4, N = 215) = 10.55$, $p = .032$. Whereas gift- and process-oriented individuals were about equally likely to say "yes" or "no," stigma-oriented individuals, by comparison, were more likely to say "no" or "don't know." With respect to H1, chi-square analysis indicated that people who drew on different virginity frames differed in the nature of the relationship they had with their partners: $\chi^2(4, N = 215) = 26.93$, $p < .001$. Specifically, first intercourse partners for stigma-oriented individuals were equally likely to be romantic, friendship, or stranger, whereas both gift- and process-oriented individuals predominately chose romantic partners. In addition, those in the three virginity frames differed in how they felt toward their first intercourse partners: $\chi^2(4, N = 214) = 53.72$, $p < .001$. The "feelings toward partner" variable was recoded into three categories: love, like (like

and friend together), and indifferent (indifferent and dislike together). Gift-oriented individuals predominantly felt love toward their first intercourse partners, process-oriented individuals were equally likely to feel love and like, and stigma-oriented individuals were more likely to state that they liked or were indifferent toward their first partners.

The lengths of relationships that individuals maintained with their first partners both before and after first intercourse also differed by virginity framework. All three frames were significantly different from each other on the length of time (in months) before first intercourse, $F(2, 214) = 10.70$, $p < .001$, with gift ($M = 4.06$) maintaining the longest relationship, followed by process ($M = 3.56$) and then stigma ($M = 2.39$). In addition, the length of the relationship after first intercourse differed between the three frames, $F(2, 213) = 22.57$, $p < .001$, with gift ($M = 5.00$) lasting significantly longer than process ($M = 3.65$) and stigma ($M = 2.78$). These results support H1: Gift individuals would have longer relationships with their partners both before and after their first intercourse experiences.

Contraception Use

The list of contraception methods used at first intercourse was categorized into four main types: condom only, oral contraceptive only, dual protection, and withdrawal/no method used. A chi-square analysis of virginity framework and contraceptive type was not significant; hence, there were no differences between the cognitive understandings of virginity in the chosen method of contraception at first intercourse. Exploratory analyses were conducted examining the use of contraception and relationship with partner (romantic, friend, or stranger), as well as contraception and feelings toward partner (recoded as love, like/friend, and indifferent/dislike). No significant differences emerged. Regardless of virginity framework, relationship status, or feelings toward partner, there were about 80% of participants stating that they used condoms or condoms and an additional method (i.e., dual protection), about 5% to 6% that used something other than condoms, and 11% to 12% that used withdrawal or nothing the first time they engaged in sexual intercourse.

Communication and Planning

The virginity frameworks were found to be significantly different from one another on the level of communication and planning that went into the first intercourse event: $F(2, 215) = 13.31$, $p < .001$. Tukey's HSD post hoc analysis indicated that all three virginity frames differed from one another. Gift-oriented individuals had the highest communication and planning scores ($M = 4.63$), followed by process-oriented individuals ($M = 3.98$) and stigma-oriented individuals ($M = 2.94$). This finding supports H2: Gift- and process-oriented individuals would have higher levels of communication and planning than stigma-oriented individuals.

Affective Reaction to First Intercourse

There was no difference between the three virginity frameworks and overall affect immediately following first sexual intercourse, $F(2, 214) = 1.98$, $p = .140$. Given that first sexual intercourse is an event that can simultaneously result in both positive and negative emotional reactions, the positive and negative items in the FCARS were separately analyzed. There was no difference between virginity frames and negative affect immediately following first intercourse; however, positive affect was significant, $F(2, 215) = 5.23$, $p = .006$. Tukey's HSD post hoc analysis indicated that gift-oriented individuals ($M = 4.47$) scored significantly higher than process-oriented individuals ($M = 3.83$) on their overall positive affect. Of the six positive emotions examined, the three virginity groups were found to differ on three and trend on one more (using a more conservative $p = .01$ for all analyses). Tukey's post hoc analyses revealed that the three groups differed in how "romantic" they felt, $F(2, 214) = 16.53$, $p < .001$, with gift-oriented ($M = 5.17$) individuals significantly higher than process- ($M = 3.70$) and stigma-oriented ($M = 3.22$) individuals. "Pleasure" also differed, $F(2, 213) = 5.08$, $p = .007$, with gift-oriented ($M = 4.49$) individuals indicating that they experienced more pleasure than those identifying as process oriented ($M = 3.67$). Group differences were also found in terms of feeling "relieved," $F(2, 214) = 11.78$, $p < .001$. Stigma-oriented ($M = 4.78$) individuals reported feeling more relief than both gift- ($M = 2.67$) and process-oriented ($M = 3.03$) individuals. Finally, a trend was demonstrated with feeling "happy," $F(2, 214) = 4.20$, $p = .016$. Gift-oriented ($M = 5.25$) individuals reported feeling more happy than process-oriented ($M = 4.50$) individuals. These findings provide partial support for H3: Gift-oriented individuals would have higher levels of positive affect.

Perceived Impact of First Intercourse on Life

Virginity frameworks significantly differed with perceived impact on life, $F(2, 214) = 9.79$, $p < .001$; gift-oriented individuals ($M = 5.11$) were significantly more likely to report that their first intercourse experience had a much larger impact on their subsequent life than stigma- ($M = 4.27$) or process-oriented ($M = 4.47$) individuals. The ILS has four domains of life that could subsequently be impacted by first intercourse: relationship dynamics with partner, self-concept, sexual knowledge, and parental connection. Separate ANCOVAs (using Bonferroni corrections), revealed that relationship dynamics, $F(2, 213) = 17.21$, $p < .001$, and parental

connections, $F(2, 213) = 5.08$, $p = .007$, both differed by virginity frame. In both cases, gift-oriented individuals perceived their lives to be more positively impacted in these two areas than process- and stigma-oriented individuals, who did not differ from each other. This finding supports H4: Stigma-oriented individuals will report that first intercourse had less of a positive impact on their lives as compared to gift-oriented individuals.

Discussion

The primary purpose of this study was to extend Carpenter's (2001, 2002, 2005) qualitative conceptualization of virginity frameworks utilizing quantitative measures. The new forced-choice measure assessing gift, stigma, and process virginity frameworks delineates the key elements or essence of each conceptual understanding of the virginity scripts present in North America. The three descriptive paragraphs seem to have strong face validity given the high confidence ratings with which participants classified themselves.

When participants were allowed to categorize themselves into one of the three virginity frameworks, slightly >50% chose process, almost 40% chose gift, and <10% chose stigma. Carpenter's (2002) research suggested about equal percentages in each virginity frame when interpreted at the time of first coitus; however, given the significant differences in samples and methodologies used in the two studies, these differences are not comparable.

Apart from the overall categorization, however, analyses using this measure did support many of Carpenter's (2001, 2005) qualitative findings. The quantitative frameworks do tend to be gendered, with women more likely to self-classify as gift oriented and men as stigma oriented. The gendered nature of these two frameworks is not surprising given the traditional sexual scripts for women and men in North American culture. The traditional sexual script dictates a very careful and guarded approach to sexuality for women. An extension of this script would have women perceiving their virginity as a possession that requires careful deliberation before being "given away." On the other hand, traditional scripts for men dictate the need for sexual knowledge and expertise as soon as possible. A logical extension of this script would be to view virginity as the antithesis of what it is to be a man and its loss as a relief. What is new in this long-held discussion of gender differences is the process framework. Process-oriented individuals represented approximately 50% of both men and women in this sample. They were more reflective regarding their first intercourse experience, understanding it as a journey of discovery and learning. Many of the comparisons between frameworks and other variables found process-oriented individuals scoring between gift and stigma, including length of relationship with partner before and after first intercourse, planning levels, some of the emotional reactions, perceived impact on life, and number of lifetime partners. The process framework may represent a more even-keeled approach to virginity and virginity loss, an approach less influenced by the traditional sexual scripts that, at the extremes, dictate either an idealistic partner (gift) or an "anyone will do" approach (stigma). More research is clearly needed. Given the size of the process group, it is possible that there are subgroups that this classification system was unable to tap. For instance, a process orientation highlights the idea that first intercourse is an inevitable rite of passage into adulthood, but also that learning and knowledge are outcomes. It is possible that these two motivations may result in different choices in terms of partners, timing, feelings, and risks. The large process group may also be an indication that the traditional gendered nature of sexual scripts is lessening within the culture, but this is speculation without age-based, cross-sectional, or longitudinal data. Camoletto (2011), however, recently suggested that some individuals are constructing a common, gender-neutral script regarding first coitus, whose elements include complicity, fun, and learning together. Camoletto noted that "The adoption of this script seems to be favoured by partners of about the same age, with the same lack of experience and the same emotional involvement" (pp. 321), not unlike the process group in this study.

Age of first intercourse did differ by virginity framework. The process framework was the youngest group ($M = 15.99$) and significantly different from the gift ($M = 16.70$) and stigma ($M = 16.94$) frameworks. The speculation is that gift-oriented individuals are older (than process-oriented individuals), on average, because they invest more time in finding and grooming the "right" partner. Stigma-oriented individuals were the oldest, highlighting the possibility that this is a group of individuals who feel that they are older than the norm and need to "catch up" to their friends. The stigma group's standard deviation for both own age at first intercourse and partners' age are larger than their process and gift counterparts, indicating that opportunity may be a better explanation for their first intercourse experiences than planning. Partners' age at first intercourse did not differ across virginity frames, suggesting that age alone is not a decision-making factor about one's first partner that differentiates the frameworks. Although the correlation between age of first intercourse and partners' age for all three frameworks was significant, it was stronger for the process group. Process-oriented individuals were more likely to have a first intercourse partner whose age was closer to their own.

The relationship context findings also support Carpenter's (2001, 2005) conclusion that love is more important to gift-oriented individuals. In this study, gift-oriented individuals, in comparison to process- or stigma-oriented individuals, clearly considered their first

partners as romantic lovers, and said that they were ''in love'' the first time. The perceived value of the gift necessitates a context in which the partner is equally committed to the relationship, respects the gift itself, and can reciprocate in kind. Love is the catalyst that makes the transition to non-virgin status respectable.

Although it is the gift-oriented framework that highlights the idea of virginity as a valuable possession given to someone who can reciprocate, these findings demonstrate that individuals with gift and process frames are similar in whether their partners' were also virgins; about one-half of each group were. The stigma group differed in that they were more likely to say their partner was not a virgin or that they did not know. The notion that stigma-oriented individuals are somewhat less knowledgeable about their partners is supported by the finding that they scored lowest on the communication and planning measure as well, all of which reinforces an ''opportunity'' motive for stigma-oriented individuals.

The ''length of relationship'' findings also support Carpenter's (2001, 2005) qualitative results. The investment in a relationship partner, developing a romantic connection, testing whether they are the right or perfect person, and discussing and planning for the first intercourse event all take time. This naturally requires more lead-up time to the first intercourse event. In addition, the investment is likely to result in greater time spent with this individual after the event, as couples may form longer-term relationships—one of the goals of the gift framework. This result is corroborated by the finding that gift-oriented individuals also had the fewest lifetime sexual intercourse partners.

Overwhelmingly, respondents reported that they used condoms or a dual protection method during their first intercourse event (82.8% combined). Only 11% indicated withdrawal or no method at all when asked about contraception at first intercourse. Contraceptive use does not seem to be influenced by virginity framework. One possible explanation for the lack of differences in contraceptive use was that gift-oriented individuals may, after planning so carefully and falling in love with their partners, take risks out of a misplaced notion of trust. Civic (1999) found that higher levels of love and longer and more committed relationships were related to less condom use, although Civic's research was not specific to first coitus. It was also plausible that given the lack of planning, stigma-oriented individuals may find themselves without contraception when the opportunity presented itself, making them more likely to engage in unprotected sex. Neither of these was the case. Gift-, stigma-, and process-oriented individuals were equally likely to use some form of protection during first coitus, and to use it at a high rate. Past research on contraceptive use has found condom use at first intercourse to be fairly common (Grunseit, 2004; Tsui & Nicoladis, 2004). Condom use has been reported at higher rates during early adolescence as compared to later adolescence, when use of a hormonal contraceptive becomes more commonplace (Rotermann, 2008; Sex Information, 2004). It should also be noted that this study was conducted in Canada where comprehensive sexuality education is commonplace. This may have also contributed to the high rates of contraceptive use during first coitus.

In terms of affective reactions to first coitus, this study found that men had more positive affects than women—a finding supported by past studies (Higgins, Trussell, Moore, & Davidson, 2010; Holland et al., 2000; Sprecher, Barbee, & Schwartz, 1995). Gift-oriented individuals reported the highest positive affect at first intercourse—different from the process group. When positive emotions were separately examined, feelings of romance and pleasure were higher for gift-oriented individuals, whereas feelings of relief were higher for stigma-oriented individuals. As mentioned earlier, love is a central component of the first intercourse experience for those who perceive their virginity as a gift. As such, greater feelings of intimacy and romance toward one's partner and, ultimately, pleasure should pervade their experiences. This study did not ascertain if participants interpreted the word *pleasure* strictly in physical terms or more generally, so future studies will need to parse the meaning of pleasure in this context. Those who perceived their virginity as a stigma felt more relieved because the goal for them is to remove the stigma; therefore, getting the event over with comes with a liberation from the shame of being a virgin. Gift-oriented individuals also suggested that their first intercourse had a greater impact on their subsequent lives than did stigma- or process-oriented individuals. Given the amount of investment gift-oriented individuals put into finding the right partner, testing their commitment, ability to reciprocate, and falling in love, it would be a surprise if they did not also say that the occasion of their first intercourse was a big deal in their lives that led to positive outcomes. The efforts put forth leading up to and planning such an event have led to greater love, intimacy, and commitment, which have enriched the event and the relationship afterward. In addition, a certain amount of self-justification might be present to rationalize the investment and effort made. Given that stigma-oriented individuals are more interested in getting the event over with and process-oriented individuals are more cerebral about first intercourse, the perceived impact the experience has on their lives is not as likely to lead to the levels reached by gift-oriented individuals.

Limitations

It is important to note a number of limitations of this study. First and foremost, the sample consisted of students at one university. Given the popularity of introductory psychology, the student composition of this course tends to reasonably represent the overall student body; however, we cannot be certain that those who volunteer for sexuality research from this course are equally representative. Research with other populations could provide insight

into the strength, distribution, and relevance of these virginity frameworks. For example, how do adolescents who have not yet experienced first intercourse understand their virginity? Are these categorizations of virginity and virginity loss relevant to gay men and lesbians? Are there other categorizations?

Second, there were a small number of males in the participant pool from which this sample was drawn and, hence, a small number in the sample. Although not uncommon in sexuality research, the lack of men in this study jeopardizes the confidence placed in their distribution across the three virginity frameworks and the gender differences found. Similarly, there are significant differences in the number of individuals who classified themselves as gift, stigma, and process. Given the unequal group sizes, the ANCOVA results lack power and, therefore, should be interpreted with caution until replicated with greater numbers of stigma-oriented individuals to compare against. However, it was never an expectation of this study that virginity frameworks would be equally distributed in this population. Carpenter (2001) suggested that her work needed to be extended to establish prevalence estimates for these frameworks. Although this study is by no means a probability sample, it does suggest that the stigma framework represents a small minority of individuals (mainly males) who possess a unique view of virginity that results in a unique behavioral approach to first coitus. Their inclusion is important.

Third, given the retrospective nature of the research, participants may have answered questions about their virginity framework, as well as a number of other measures (e.g., affective reaction to first intercourse), based on their current thinking on, and relationship with, their first intercourse partner, and not on their feelings at the time. Every effort was made in the instructions to get the participants to remember their feelings at the time of the event; however, the event itself and events that have transpired since may have colored respondent's recall. Fortunately, the gap between participants' average age of first intercourse (16.4 years) and their average age when completing the survey (20.3 years) was a relatively short period of time, and first intercourse tends to be a very memorable event. Having said that, Carpenter (2001, 2005) suggested that there may be some shifting of frameworks pre to post first intercourse, and if that is the case, it may explain the large process group and the small stigma group in the breakdown of the sample. For example, it could be that the stigma frame is more transitory than either the gift or process frames. The goal of stigma-oriented individuals is to get rid of the sexual identity of *virgin* because it is perceived as socially shameful. Once shed, it seems possible that these individuals may be free to reinterpret their life prior to intercourse as something other than stigmatized. They may change to a process framework more easily than would gift-oriented individuals. In addition, there may be a number of stigma-oriented individuals who have this framework because they believe their first sexual experience should have occurred by now and has not. Donnelly, Burgess, Anderson, Davis, and Dillard (2001) referred to this as being "*off time* in making normative sexual transitions" (p. 159), resulting in the unfortunate situation of being involuntarily celibate. Some individuals may start their young adolescence thinking of their virginity as a gift or process, and then change to stigma in their late adolescence or early adulthood because they are anxious about not progressing "normally." It is also possible that a response bias is influencing the relative size of the three virginity groups. As virginity itself becomes less stigmatized in the culture, fewer individuals may endorse stigma or gift scripts.

Fourth, the use of a force-choice measure to assess virginity frameworks is an important first step, but also limiting in that the frameworks likely overlap and individuals may have perspectives that incorporate more than one frame. Specific combinations of frameworks are more likely than others. For example, both gift- and stigma-oriented individuals may agree with elements of the process frame much easier than they would agree with each other's perspectives. Given the potential overlap, it would be useful to develop a continuous measure that allows individuals to rate their affinity to each framework, as well as the strength of those affinities.

Fifth, some of the measures were newly created for this study—namely, the CPS and the ILS—and, therefore, have yet to be supported with reliability or validity data.

Finally, the samples and methodological approaches used in this study and those used by Carpenter (2001) are quite different; therefore, comparisons between the findings of the two studies need to be interpreted with caution. Carpenter's (2001) qualitative sample was smaller, but demographically more diverse, than the university students used in this quantitative survey study. More research is needed to verify the prevalence and breakdown of the virginity scripts.

In summary, this study provides a preliminary quantitative investigation of the prevalence of patterns of virginity frameworks in a university population. In addition, it suggests that different interpretations of virginity and first coitus do result in different choices when individuals make their sexual intercourse debut. Identifying these frameworks and the subsequent sexual behavior patterns associated with them will aid researchers and educators alike in understanding the contribution of internalized sexual scripts to the decision-making process for first coitus.

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