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Testing Predictions From the Male Control Theory of Men's Partner Violence

Elizabeth A. Bates[1]*, Nicola Graham-Kevan[2], and John Archer[2]

[1]*Department of Applied Psychology, University of Cumbria, Carlisle, Cumbria, United Kingdom*
[2]*School of Psychology, University of Central Lancashire, Preston, United Kingdom*

The aim of this study was to test predictions from the male control theory of intimate partner violence (IPV) and Johnson's [Johnson, M. P. (1995). *Journal of Marriage and the Family, 57*, 282–294] typology. A student sample ($N = 1{,}104$) reported on their use of physical aggression and controlling behavior, to partners and to same-sex non-intimates. Contrary to the male control theory, women were found to be more physically aggressive to their partners than men were, and the reverse pattern was found for aggression to same-sex non-intimates. Furthermore, there were no substantial sex differences in controlling behavior, which significantly predicted physical aggression in both sexes. IPV was found to be associated with physical aggression to same-sex non-intimates, thereby demonstrating a link with aggression outside the family. Using Johnson's typology, women were more likely than men to be classed as "intimate terrorists," which was counter to earlier findings. Overall, these results do not support the male control theory of IPV. Instead, they fit the view that IPV does not have a special etiology, and is better studied within the context of other forms of aggression. Aggr. Behav. 40:42–55, 2014. © 2013 Wiley Periodicals, Inc.

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INTRODUCTION

One view of intimate partner violence (IPV) that has been influential in terms of public policy is the "gender perspective" (Felson, 2002), which is associated with feminist analyses (e.g., Debbonaire & Todd, 2012; DeKeseredy, 1988, 2011; Dobash & Dobash, 1979, 2004; Fagan & Browne, 1994; McHugh, Livingston, & Ford, 2005; Pagelow, 1984; Schwartz & DeKeseredy, 2003). Specifically, it holds that men's violence to women arises from patriarchal values, which motivate men to seek to control women's behavior, using violence if necessary. Two further assumptions are that such values produce attitudes supportive of men's violence to women, and that IPV should be studied independently of general aggression research, since general models of aggression do not characterize this form of violence (e.g., Browne, 1987). In particular, men's control is viewed as resulting from patriarchal values (e.g., Dobash & Dobash, 1979) rather than as part of an interpersonal style that can exist in either sex (e.g., Connolly, Pepler, Craig, & Taradash, 2000).

Paralleling the gender perspective in terms of its emphasis on male controlling behavior as a cause of IPV is the evolutionary mate-guarding view. This holds that men always run the risk of devoting time and resources to rearing offspring that may not be their own. Since this would be highly maladaptive, counter-measures have evolved in men, as they have in the males of other mammals (Daly & Wilson, 1980, 1988, Daly, Wilson, & Weghorst, 1982; 1992, 1998). Among these measures are male sexual jealousy and the motive to control their female partner's behavior, associated with a proprietary male mindset. This view of IPV leads to similar predictions to the patriarchal control theory, although the ultimate cause is different: paternity uncertainty rather than patriarchy (see Archer, 2013).

In contrast to these views of IPV that emphasize a separate cause from other forms of violence, Felson (2002, 2006, 2010) and others (e.g., Dutton, 2010, 2012) have advocated studying IPV within the context of violence in general, which includes forms of violence that occur outside the home. Felson's analysis indicates the

*Correspondence to: Elizabeth A. Bates, University of Cumbria, Fusehill Street Campus, Carlisle CA12HH, UK.
E-mail: Elizabeth.bates@cumbria.ac.uk

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degree to which IPV is similar to other forms of violence and criminal behavior. Similarly, Hamel (2007) advocated a "gender-inclusive" approach to IPV, that is, avoiding any preconceptions that it must necessarily be primarily male-to-female, as the male control approaches do. Supporting these views are an extensive range of studies, originally undertaken from a family violence perspective (Straus, 1977-8, 1979, 1999), showing that women are as likely to be physically aggressive towards their partner as men are, if not more so (Archer, 2000, 2002; Moffitt, Caspi, Rutter, & Silva, 2001; Straus, 2011; Straus & Ramirez, 2007). Furthermore, these studies usually report both victimization and perpetration, and typically show high correlations between the two measures, indicating a degree of mutuality in IPV (e.g., Carrado, George, Loxam, Jones, & Templar, 1996; Kessler, Molnar, Feurer, & Applebaum, 2001; Straus, 2008, 2011; Straus & Ramirez, 2007). For this reason we used both measures of perpetration and victimization in the analysis of IPV.

A large number of studies on general patterns of physical aggression (e.g., Archer, 2004, 2009; Moffitt et al., 2001) and crime statistics (e.g., Daly & Wilson, 1988, 1990; Povey, Coleman, Kaiza, Hoare, & Jansson, 2008) show that men are more physically aggressive than women to same-sex non-intimates. This provides a different pattern to that for IPV in Western nations, suggesting there is a contrasting pattern of sex differences in aggression: men are more aggressive than women are to same-sex non-intimates, whereas women are as aggressive (or more so) to their male partners than men are to their female partners. Few studies have assessed both types of aggression within the same sample, but those that have find that this pattern of sex differences is evident within the same individuals (Archer, 2004, Table I). Swahn, Simon, Arias, and Bossarta (2008) examined prevalence data from a large youth violence survey and found that perpetration to peers was more prevalent for men than for women and that IPV was more prevalent for women than for men. A similar pattern was found in a large US representative sample of adults by Klevens, Simon, and Chen (2012): whereby men were more likely than women to physically aggress to a friend or to a stranger, women were more likely than men to physically aggress to a partner.

The contrasting pattern of sex differences found for aggression to same-sex non-intimates and to partners described above raises the question of whether men show a lower level of physical aggression to a partner than to same-sex non-intimates or whether women show a higher level to a partner than to same-sex non-intimates. Felson (2000, 2002) emphasized the first alternative as being consistent with boys being taught from an early age that they should not hit girls (see also Archer, 2006). Cross, Tee, and Campbell (2011) tested this hypothesis by presenting participants with three conflict scenarios, involving a partner, same-sex non-partner or opposite-sex non-partner, and asking them to rate the likelihood of using physical and verbal aggression. Men were found to show less physical aggression to a partner than to a same-sex non-partner, and women to show more physical aggression to a partner than to a same-sex non-partner, but with a smaller difference. Cross and Campbell (2012) extended this using self-reported aggression and found similar results. This supports the claim (e.g., Felson, 2000, 2002) that norms of chivalry cause men to inhibit physical aggression towards partners, and that women do not owing to the lack of social sanctions associated with their aggression. There are also studies demonstrating more social acceptance of women's than men's physical aggression to partners (Harris & Cook, 1994; Simon et al., 2001; Sorenson & Taylor, 2005; Taylor & Sorenson, 2005): this raises the possibility of women's aggression to male partners being disinhibited compared to that towards other women.

The first aim of the current study was to examine sex differences in aggression to both intimate partners and same-sex non-intimates within the same sample. First to establish the contrasting pattern of sex differences outlined above, and second to assess whether the men's aggression to a partner is lower than that to other men, and women's is greater to a partner than to other women. To do this, we calculated the within-subjects effect size measures used by Cross and Campbell (2012) cited above: these constitute what has been termed a "target shift" (Davidovic, Bell, Ferguson, Gorski, & Campbell, 2011).

It is of interest to know whether it is the sex of, or relationship with, the target that produces the contrasting pattern. Previous studies using same- and opposite-sex opponents who were not partners have found a similar pattern to that in IPV studies in children or adolescents (Archer, 2004, Table I), suggesting that it is sex rather than relationship status that underlies the difference. Cross et al. (2011) examined this issue, by using opposite sex-partner, same-sex friend and opposite-sex friend and by separating the sex and relationship status of the opponent; they found that men's lesser aggression to a partner was a function of sex whereas women's greater aggression to a partner was a function of relationship status. For simplicity, in the current study we only used two categories of opponent, an opposite sex partner and a same-sex non-intimate. We therefore used the main categories that have been the concern of previous accounts of sex differences in physical aggression (Archer, 2000, 2004).

The second aim of the study was to assess predictions from the control theory of male IPV outlined above,

namely that: (1) men would seek to control their partners to a greater extent than women would; (2) controlling behavior would be associated with IPV in men but not women; and (3) there would be no relationship between IPV and aggression to same-sex non-intimates, since IPV is regarded as etiologically different to other types of aggression.

In an attempt to build a bridge between the conflicting findings of feminist and other family violence researchers, Johnson (1995) argued that there were two qualitatively distinct forms of IPV: the first involves low levels by both sexes in the absence of the control motive (originally termed "common couple violence," subsequently renamed as "situational couple violence"); the second involves coercive aggression by a man that is motivated by the need to maintain control over his partner (originally termed "patriarchal terrorism," subsequently renamed as "intimate terrorism"). By making this distinction, and regarding the first type as being of little social concern, Johnson was able to distance serious cases of male IPV from the majority of IPV typically studied by family violence researchers, and hence re-establish the relevance of the feminist approach to IPV. He later adapted his typology to include the behavior of partners (Johnson, 2006), expanding the typology to include (1) "mutual violent control," representing a relationship characterized by control and violence by both partners, and (2) "violent resistance," characterized by self-defense or retaliation by victims (mainly women) of an intimate terrorist.

Johnson (1995) found support for his original typology using samples selected for a high proportion of male-to-female aggression (e.g., women's shelter samples) and general surveys. This initial selection may well have produced the expected categories (Archer, 2009). The other sample Johnson used was a national violence against women survey that cannot be regarded as an unbiased sample of violence by both sexes (Archer, 2000, 2002, 2009). Other studies that have found broad support for the distinct sub-groups of intimate terrorism and situational couple violence have used shelter and general samples (e.g., Graham-Kevan & Archer, 2003a, 2003b).

The assumptions Johnson made about sex differences in the intimate terrorist category are questioned by findings from other studies using non-selected samples, and those of male victims of IPV. Bates and Graham-Kevan (2012) found that men and women were equally likely to be categorized as intimate terrorists. Other studies indicate that control and controlling aggression are characteristic of both sexes (Dutton & Nicholls, 2005; Felson & Outlaw, 2007; Graham-Kevan, 2007; Graham-Kevan & Archer, 2009). Furthermore, Hines (e.g., Hines & Saudino, 2003; Hines, Brown, & Dunning, 2007; Hines & Douglas, 2010) has described the severe physical and psychological effects that male victims of IPV suffer.

In summary, the overall aim of the current study was to test several predictions derived from contrasting approaches to IPV. Following initial investigation of sex differences in both IPV (between heterosexual couples) and aggression towards same-sex non-intimates in the same sample, we investigated whether men would show lower levels of physical aggression to partners than to same-sex non-intimate opponents, and whether women would show higher levels to partners than to same-sex non-intimates. We then examined whether people would show a general tendency to behave aggressively, or whether IPV is relatively independent of the tendency to aggress to non-intimate members of the same-sex, which would be expected if it were etiologically different to other types of aggression.

We tested three further predictions from male control theory: (1) that men would show more controlling behavior to their partners than women would; (2) that controlling behavior to a partner would be linked to IPV for men but not for women; and (3) that men's controlling behavior to a partner would be unrelated to their physical aggression to a same-sex non-intimate. We then tested some of Johnson's assumptions about IPV, control (perpetration and victimization) and gender, specifically the following: (1) that the association between IPV and control shows two distinct clusters rather than following a linear pattern, an assumption that follows from the view that intimate terrorism is qualitatively different from situational couple violence (Johnson, 1995); (2) that similar proportions of men and women are to be found among perpetrators of low-level physical aggression that does not involve controlling motives ("situational couple violence"), whereas men are to be found disproportionately among the perpetrators of high-level physical aggression accompanied by controlling motives ("intimate terrorists"); and (3) that control in relationships would be unrelated to aggression to same-sex non-intimates.

METHOD

Participants and Procedure

Participants were all students recruited via e-mail and undergraduate lectures at the University of Central Lancashire. Questionnaires were available for completion online and by hard copy, with a total of 366 of the final 1,104 questionnaires being completed online. To complete the questionnaire, all participants were required to be in a romantic relationship, or have been in a romantic relationship, of at least 1 month's duration. Full ethical approval was gained from the University Ethics Committee before data collection commenced.

The participants were 706 women and 398 men aged between 16 and 71 years ($M = 23.55$, $SD = 7.94$) with the men being significantly older ($M = 26.69$, $SD = 10.52$) than the women ($M = 21.82$, $SD = 5.32$): $t(500.11) = 8.54$, $p < .001$) The majority of the sample described themselves as "White" (91.2%), with 4.4% describing themselves as "Asian, Asian English or Asian British," 1.4% as "Black, Black English or Black British" and 3% as "mixed background." Most of the sample stated they had a current partner (63.6%), of which 36.6% lived with the partner. Of those who had a current partner, 85.9% stated that their relationship was long term (6 months or more); of those who did not have a current partner, 53.7% indicated that their previous relationship had been long term. All were heterosexual relationships: homosexual participants were excluded due to the small number.

Materials

For IPV and aggression towards a same-sex non-intimate, a modified version of the original Conflict Tactics Scales (CTS: Straus, 1979) was used. This included all the standard CTS items, examples of which included: "insulted or swore at them" (verbal aggression scale); and "hit or tried to hit with something" (physical aggression). It also included the following items from the Richardson Conflict Response Questionnaire (RCRQ: Green, Richardson, & Lago, 1996): "yelled or screamed at them" and "tried to make them look stupid" added to the verbal aggression sub-scale.

There were two versions of the scale, the first asked participants about their perpetration of IPV during the past 12 months. The second asked about their perpetration of same-sex aggression; they were asked to think about conflicts with someone of the same sex as them (but not a romantic partner) within the last 12 months. The responses for these items were recorded on a six-point Likert scale based on the original CTS format: from 0 (this has never happened) to 6 (>20 times). The analysis involved the items being coded into two sub-scales for perpetration: verbal aggression, and physical aggression. All subscales showed acceptable reliabilities for both the IPV version (verbal aggression $\alpha = .87$ and physical aggression $\alpha = .85$) and the same-sex non-intimates version (verbal aggression $\alpha = .87$ and physical aggression $\alpha = .91$).

To measure controlling behavior, the controlling behavior scale was used (CBS-R: Graham-Kevan & Archer, 2005). Participants were asked to rate how frequently they perpetrated and experienced a list of 24 controlling acts during their relationship, on a five-point Likert scale, from 0 (never did this) to 4 (always did this). The scale was developed from information presented in the Domestic Abuse Intervention Project (DAIP: Pence & Paymar, 1993) which involved examples of controlling behavior reported by both perpetrators and victims as being behavior violent men used against their partners. Examples include: "Want to know where the other went and who they spoke to when not together," "Use nasty looks and gestures to make the other one feel bad or silly," "Try and restrict time one spent with family or friends" and "act suspicious and jealous of the other one." Again, reliability levels were acceptable for both the perpetration ($\alpha = .90$) and victimization scales ($\alpha = .91$).

RESULTS

Sex Differences

Sex differences were examined using MANCOVAs. This involved using sex as the independent variable, controlling for age and using the two aggression scales as dependent variables (verbal aggression and physical aggression) for IPV and aggression towards same-sex non-intimates. Crime statistics and aggression questionnaires show a decrease in aggression with age (e.g., Daly & Wilson, 1990; Eisner, 2003; O'Leary, 2006; Walker & Richardson, 1998; Walker, Richardson, & Green, 2000). Owing to the older mean age of the males in this sample, age was controlled in the analysis of sex differences.

Table I shows that women were significantly more physically and verbally aggressive to their partners than men were. Table I further shows that men used significantly more physical and verbal aggression towards non-intimate members of the same sex than women did. Table I further shows that women reported perpetrating significantly more controlling behavior overall than men did. However, men and women reported that their partners used controlling behavior at a similar rate. These findings do not support the hypothesis (from male control theory) that men would seek to control their partners to a greater extent than women would.

Within-Subjects Analysis

Within-subjects analyses of *d* values were performed to ascertain the extent to which men and women showed higher or lower levels of aggression to their partners than to same-sex non-intimates. An online effect size calculator was used (http://cognitiveflexibility.org/effect-size/): in addition to means and standard deviations, the correlation between the means was entered to correct for dependence using Morris and DeShon's (2002, Equation 8).

The within-subjects effect size for physical aggression was $d = -.22$ ($t = -4.21$, $p < .001$) for men, and $d = .20$ ($t = 5.21$; $p < .001$) for women. This indicates that men showed lower aggression to their partners than

TABLE I. Mean Frequency and (Standard Deviations), *F* and *d* Values of Acts of Self-Report Physical and Verbal Aggression Perpetrated Against Intimate Partners and Same-Sex Targets

	Male ($N = 398$)	Female ($N = 706$)	Sample Mean ($N = 1104$)	*d*-Value[a]	*F*-Value[b]
IPV Perp. physical	.90 (3.62)	1.56 (3.64)	1.32 (3.65)	−.15	5.78*
IPV Perp.verbal	7.39 (7.87)	11.98 (9.15)	10.32 (8.98)	−.47	57.03**
IPV Vic. verbal	9.02 (9.14)	11.26 (9.71)	10.46 (9.56)	−.24	9.43*
IPV Vic. physical	1.56 (4.85)	1.24 (3.68)	1.35 (4.14)	.08	3.07
SSA physical	1.90 (5.24)	.77 (3.21)	1.18 (4.09)	.32	27.51**
SSA verbal	7.53 (8.27)	7.12 (7.81)	7.27 (7.98)	.19	8.89*
Control Perp.	8.82 (10.97)	11.11 (10.65)	10.31 (10.82)	−.21	3.95*
Control Vic.	11.74 (13.82)	12.90 (12.59)	12.55 (13.09)	−.09	.15

*$p < .05$.
**$p < .001$.
[a]A positive *d* value indicates a higher male score, a negative value indicates a higher female score, controlling for age.
[b]This is derived from a MANCOVA analysis controlling for age, with *df* of (1, 1,089) the *F* denotes univariate *F* values. The multivariate *F* was found to be significant: $F(4, 1{,}086) = 29.72$, $p < .001$.

to same-sex non-intimates whereas women showed higher aggression to partners than to same-sex non-intimates, to a similar extent. The correlations between IPV and same-sex non-intimates aggression were significant for both men and women ($r = .47$ and .32, respectively).

For verbal aggression, the within-subjects effect sizes were $d = -.02$ ($t = -.31$; $p = .75$) for men and $d = .52$ ($t = 13.81$; $p < .001$) for women. Again there were significant correlations between aggression to partners and to same-sex non-intimates for both men ($r = .41$) and women ($r = .40$). The negligible difference between same-sex and IPV for men's verbal aggression indicates that they were equally verbally aggressive to both opponents, unlike physical aggression which was lower to a partner. In contrast, women were more verbally aggressive to partners than to same-sex non-intimates, consistent with the findings for physical aggression.

Feminist analyses do not predict a relationship between IPV and aggression to same-sex non-intimates. However, the proportion of the sample perpetrating one or more acts of both forms of aggression was 9.2%, and it was similar for men and women. Over twice this percentage perpetrated one or more acts of IPV only (18.4%), and this was heavily skewed for women with 24.5% falling into this category, compared to 7.5% of men. This compared to 9.1% who had perpetrated one or more acts of aggression to same-sex non-intimates only. These figures demonstrate both an overlap between IPV and same-sex aggression, and a substantial proportion of the sample showing IPV but not aggression to same-sex non-intimates. This was substantially greater for women than for men: there were around three times more women than men who showed IPV but no physical aggression to same-sex non-intimates. These figures can be viewed as men tending to inhibit their physical aggression to a female partner and women tending to disinhibit their physical aggression to a male partner.

Predictors of Physical Aggression

To address the hypotheses derived from the male control theory of IPV, that aggression perpetration and control would be associated for men but not women, and that there would be no relationship between IPV and aggression to same-sex non-intimates, the association between the controlling behavior measures (perpetration and victimization) and physical aggression was examined using a series of regressions.

In studies of physical aggression, the majority of participants are typically non-aggressive (Archer, Fernández-Fuertes, & Thanzami, 2010), thus creating a skewed data-set that is over-dispersed (i.e., the standard deviation is higher than the mean). This makes the standard regression models inappropriate. Instead, the preferred analytical technique is negative binomial regression (Gardner, Mulvey, & Shaw, 1995; Hilbe, 2007; Hutchinson & Holtman, 2005). Prior to carrying out the analysis, we calculated the zero-order correlations between the measures of aggression (both IPV and same-sex non-intimates) and controlling behavior (perpetration and victimization). Table II shows that there were significant, and in some cases strong, positive relationships between all of the variables in the correlation matrix. As expected from previous studies (see Introduction), IPV perpetration and victimization were strongly correlated ($r = .69$), but not to the extent that indicates multicolinearity. Perpetration of controlling behavior was strongly correlated with IPV perpetration, and aggression to same-sex non-intimates, and this applied to both sexes.

Control perpetration, control victimization, and aggression to same-sex non-intimates were regressed on IPV perpetration, separately for men and women. According to the male control theory, control

TABLE II. Zero-Order Correlations Between IPV, Same-Sex Aggression Perpetration, Control Perpetration and Control Victimization [Men/Women]

	IPV Vic.	SS Perp.	Control Perp.	Control Vic.
IPV Perp.	.692** [.725**/.693**]	.364*a [.471**/.321**]	.528** [.550**/.509**]	.447** [.498**/.415**]
IPV Vic.		.357** [.324**/.398**]	.500** [.539**/.489**]	.502**a [.568**/.455**]
SS Perp.			.352**a [.470**/.294**]	.245**a [.321**/.192**]
Control Perp.				.723** [.719**/.727**]

* = $p < .05$;
** = $p < .001$.
[a]Denotes that the correlation coefficients for men and women were significantly different.

perpetration should predict men's, but not women's, IPV perpetration whereas aggression to same-sex non-intimates would not be related. Table III shows that perpetration of controlling behavior, aggression to same-sex non-intimates and IPV victimization were all significant predictors of men's use of IPV, the latter being the strongest predictor. For women, all four predictors were significant, with IPV victimization being the strongest, followed by controlling behavior perpetration. The goodness of fit statistic was acceptable (deviance = .47 and .60 for men and women respectively). A further calculation was made from the regression results, to compare the magnitude of men's and women's beta coefficients, using a method described by Paternoster, Brame, Mazerolle, and Piquero (1998). This showed no significant sex differences, indicating that the predictors had similar magnitudes for both sexes.

Table IV shows the second regression where controlling behavior perpetration and victimization and IPV perpetration and victimization were regressed onto aggression to same-sex non-intimates, again separately for males and females. The male control theory of IPV implies that control of a partner would be unrelated to this type of aggression perpetration. In contrast, Table IV shows that for men, perpetration of controlling behavior to a partner did significantly predict their use of aggression towards same-sex non-intimates. In fact it was the only significant predictor. For women, only their perpetration of IPV significantly predicted their use of aggression to same-sex non-intimates, other predictors being non-significant. The goodness of fit statistic for this analysis was acceptable (deviance = .61 and .33 for men and women, respectively). There were no significant differences between men's and women's beta coefficients, indicating that the predictors were of a similar magnitude in both sexes.

As mentioned above, the male control theory of IPV would predict no or low associations between IPV and aggression to same-sex non-intimates, however here there was a moderate correlation between these two measures, which was stronger for men than for women, although in both cases aggression to same-sex non-intimates was a significant predictor of IPV in the regression analysis, which does not support the view that they are independent.

Assessing Johnson's Typology

To test one aspect of Johnson's typology (described above), that men are more likely to be among those showing high control, a cluster typology was established

TABLE III. Negative Binomial Regression of Controlling Behavior Perpetration and Victimization, IPV Victimization and Same-Sex Aggression Perpetration onto IPV Perpetration, Separately for Males and Females

Parameter	*df*	*B*	*SE*	Wald 95% CI		χ^2	*P*
Males							
Intercept	1	−2.40	.22	−2.83	−1.97	119.33	<.001
Control Perp.	1	.04	.02	.01	.07	5.13	.024*
Control Vic.	1	.02	.01	−.01	.05	2.52	.112
IPV Vic.	1	.17	.03	.10	.24	23.54	<.001**
SSA Perp.	1	.01	.02	−.04	.06	.23	.028*
Females							
Intercept	1	−1.12	.14	−1.39	−.85	67.92	<.001
Control Perp.	1	.04	.01	.02	.06	20.23	<.001**
Control Vic.	1	.02	.01	.00	.03	4.18	.041*
IPV Vic.	1	.18	.03	.12	.24	.34.96	<.001**
SSA Perp.	1	.07	.03	.01	.13	4.98	.026*

* = $p < .05$;
** = $p < .001$.

TABLE IV. Negative Binomial Regression of Controlling Behavior Perpetration and Victimization, IPV Perpetration Victimization onto Same-Sex Aggression Perpetration Separately for Males and Females

Parameter	*df*	*B*	*SE*	Wald 95% CI		χ^2	*P*
Males							
Intercept	1	−.03	.19	−.40	.34	.03	.857
Control Perp.	1	.05	.02	.01	.09	5.34	.021[a]
Control Vic.	1	−.01	.02	−.04	.03	.18	.669
IPV Perp.	1	.08	.05	−.02	.19	2.38	.123
IPV Vic.	1	−.03	.05	−.12	.07	.27	.602
Females							
Intercept	1	−1.39	.24	−1.85	−.92	34.20	<.001**
Control Perp.	1	.02	.02	−.03	.06	.56	.454
Control Vic.	1	.01	.02	−.03	.05	.41	.524
IPV Perp.	1	.14	.07	.01	.27	4.33	.037[a]
IPV Vic.	1	.06	.06	−.06	.18	1.01	.315

**$p < .001$.
[a]Significant at <.05 level.

to distinguish those who would be classed as "high control" and "low control" based on their responses to the CBS-R (Graham-Kevan & Archer, 2005). The purpose of this was to test whether men or women were more likely to be classified as high or low control: Johnson's (1995) typology suggests that men are more likely to be classed as "high control." A K-Means Cluster analysis was performed using the 24 items that measured control, and this was undertaken for both perpetration and victimization scores. A two-cluster solution was selected, using Eucilidean distance as a measure of dissimilarity, and named "high control" and "low control." A *t*-test confirmed that high control ($M = 28.12$, $SD = 11.40$) was significantly higher than low control ($M = 6.23$, $SD = 4.99$): t (223.30) = 26.98, $p < .001$. A two-cluster solution was also selected for victimization scores so that each participant was also classified as being a victim of high or low control. Similarly, Eucilidean distances were used as a measure of dissimilarity. A *t*-test confirmed that the high control cluster ($M = 35.05$, $SD = 12.24$) was significantly higher than low control ($M = 7.51$, $SD = 6.11$): t (223.92) = 31.14, $p < .001$.

To further test the hypothesis derived from male control theory that men would use more controlling behavior than women, we tested for sex differences within this control typology. Table V shows the total figures and percentages. Using a Chi square test (for both perpetration and victimization) we determined whether men or women were significantly more often categorized as "high" or "low" control. For perpetration, there was a significant difference (χ^2 (1) = .3.89, $p < .001$), men being more likely to be classified as "low control" and women more likely to be classified as "high control." For victimization there was no significant difference (χ^2 (1) = .13, $p = .724$), indicating that men and women were equally likely to be classed as having a high or low controlling partner. These findings are inconsistent with Johnson's (1995) view that high control is characteristic of men.

Figure 1 shows the distribution of participants by controlling behavior and IPV perpetration. Johnson's theory would predict two distinct clusters, the first representing no control and/or aggression and those using "situational couple violence," which was viewed as lacking in control and high level of aggression. The second cluster would be characterized by high control and high levels of violence, with more men being identified in it. This pattern was not found in the current study: the scatterplot indicates more of a linear than a categorical relationship between the two variables. Most people in the current (unselected) sample were found at the low control and low aggression end of the scale. Those who have used controlling behavior and aggression have done so throughout the range, producing positive correlations between control and IPV (Table II).

We then selected only the participants who stated that they had perpetrated one or more acts of physical aggression against their partner in the last 12 months.

TABLE V. Prevalence of Type of Control Typology (by Sex)

		Male ($N = 398$)	Female ($N = 706$)	Total ($N = 1,104$)
Perpetration	High control	62 (15.6%)	144 (20.4%)	206 (18.7%)
	Low control	336 (84.4%)	562 (79.6%)	898 (81.3%)
Victimization	High control	75 (18.8%)	127 (18%)	202 (18.3%)
	Low control	323 (81.2%)	579 (82%)	902 (81.7%)

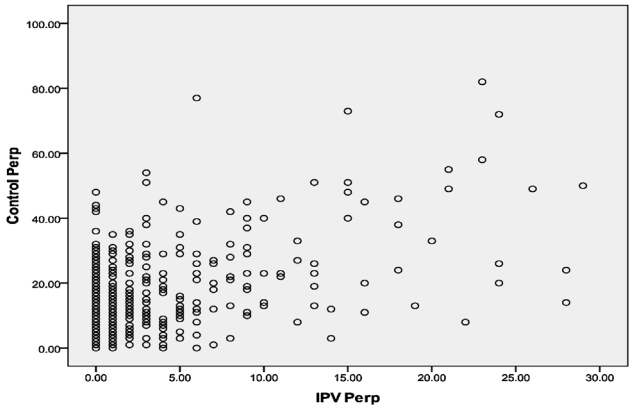


Fig. 1. A scatterplot depicting the relationship between IPV perpetration and controlling behavior perpetration ($\beta = .53, p < .001$).

The frequencies and Chi Square values were then recalculated to determine whether the same results would be obtained for only the aggressive participants in the sample. The Chi Square value for these participants was non-significant (χ^2 (1) = 1.49, $p = .223$), indicating that among this sub-sample, men and women were equally likely to be classified as high and low control.

The two cluster analyses were then combined to categorize participants into one of four categories based on their perpetration and victimization of controlling behavior, so as to fit with Johnson's four types: mutual violent control (high control perpetration, high control victimization); intimate terrorism (high control perpetration, low control victimization); violent resistance (low control perpetration, high control victimization) and situational couple violence (low control perpetration, low control victimization). Table VI shows the frequencies for both control typologies in the aggressive sample. Most of the participants were in the low control group, situational couple violence. An overall Chi square indicated that men and women were equally likely to be found in all categories (χ^2 (3) = 6.59, $p = .086$). Consistent with Johnson's hypothesis men and women were equally likely to be found in the "situational couple violence" category. However, the finding that men and women were equally likely to be classified as "intimate terrorists" is inconsistent with his hypothesis that men would be more likely to be classified as intimate terrorists and violent women would be more likely to be classified as violent resisters.

TABLE VI. Prevalence of Type of Controlling Relationships Within the Sample Who Had Perpetrated IPV (by Sex)

	Male ($n = 68$)	Female ($n = 237$)	Total ($n = 305$)
Intimate terrorism	5 (7%)	26 (11%)	31 (10%)
Mutual violent control	27 (40%)	66 (28%)	93 (31%)
Situation couple violence	27 (40%)	126 (53%)	153 (50%)
Violent resistance	9 (13%)	19 (8%)	28 (9%)

Analysis of Aggression Perpetration Within the Control Categories

This analysis used the control categories created in the previous analysis and was performed to examine the frequency of aggression in these categories within the whole sample. This involved a 2 (men vs. women) × 2 (high control perpetration vs. low control perpetration) × 2 (high control victimization vs. low control victimization) MANCOVA with IPV perpetration and aggression to same-sex non-intimates as the dependent variables, and controlling for age. According to Johnson's theory, high controlling relationships should also show the most aggression but control would be unrelated to aggression to same-sex non-intimates: therefore, no difference should be found for this measure.

Table VII shows the means and standards deviations for this analysis. Those who were classified as "high control" perpetrators also showed more aggression (multivariate: $F(3, 1{,}081) = 24.29$, $p < .001$). This applied to both IPV perpetration ($F(1, 1{,}083) = 59.40$, $p < .001$) and aggression to same-sex non-intimates ($F(1, 1{,}083) = 31.72$, $p < .001$). Those who were classified as victims of "high control" partners showed more IPV perpetration ($F(1, 1{,}083) = 32.06$, $p < .001$) and aggression to same-sex non-intimates ($F(1, 1{,}083) = 18.83$, $p < .001$). These results indicate that relationships characterized by high levels of control are also characterized by high levels of aggression perpetration involving partners and same-sex non-intimates.

Interactions

An exploration of the interactions showed some significant interactions for gender × perpetration cluster (multivariate: $F(3, 1{,}081) = 3.72$, $p < .05$). The interaction was only significant for aggression to same-sex non-intimates ($F(1, 1{,}083) = 8.12$, $p < .01$). Examination of the interactions indicates that men's aggression to same-sex non-intimates is higher in both the high and low control perpetration groups but that the sex difference is much greater in the high control group.

Significant interactions were found for control perpetration cluster × control victimization cluster (multivariate: $F(3, 1{,}081) = 10.80$, $p < .001$) for aggression to same-sex non-intimates ($F(1, 1{,}083) = 18.04, p < .001$) and IPV perpetration ($F(1, 1{,}083) = 9.56$, $p < .01$). Exploration of the interactions indicated that within the high control perpetration group the differences between high and low control victimization in terms of aggression perpetration is greater than in the low control group.

TABLE VII. Means and (Standard Deviations) for Aggression Perpetration and Victimization (by Control Perpetration and Victimization and Gender)

		Men ($N = 398$)	Women ($N = 706$)	Row Mean ($N = 1,104$)
High control Perp.	SS Perp.[a]	5.73 (8.38)	2.02 (5.60)	3.14 (6.76)
	IPV Perp.	4.06 (7.44)	4.47 (5.93)	4.35 (6.41)
	IPV Vic.	5.73 (8.94)	3.79 (6.61)	4.37 (7.42)
Low control Perp.	SS Perp.	1.20 (4.06)	.45 (2.11)	.73 (3.01)
	IPV Perp.	.31 (1.80)	.81 (2.23)	.62 (2.09)
	IPV Vic.	.82 (3.14)	.55 (1.89)	.65 (2.44)
High control Vic.	SS Perp.	5.12 (8.27)	2.19 (5.75)	3.28 (6.92)
	IPV Perp.	3.76 (7.48)	4.32 (5.90)	4.17 (6.52)
	IPV Vic.	5.88 (8.85)	4.28 (6.71)	4.87 (7.59)
Low control Vic.	SS Perp.	1.15 (3.89)	.46 (2.19)	.71 (2.93)
	IPV Perp.	.23 (.99)	.95 (2.56)	.70 (2.16)
	IPV Vic.	.59 (2.45)	.54 (2.01)	.56 (2.18)

[a]SS Perp., same-sex perpetration; IPV Perp., intimate partner violence perpetration; IPV Vic., intimate partner violence victimization.

These results indicate that more aggression is found in the high than in the low control group, and that this difference is often more pronounced when examined by victimization group. There were no significant interactions for the gender × victimization cluster (multivariate: $F(3, 1,081) = .94$, $p = .421$).

DISCUSSION

The aim of the current study was to test several predictions derived from contrasting approaches to understanding IPV. The male control theory of IPV, derived separately from feminist and evolutionary theory, predicts that there would be sex differences in IPV and the use of control tactics within relationships. According to feminist researchers (e.g., Browne, 1987; Dobash & Dobash, 1979; Saunders, 1986; Smith, 1990; Walker, 1989) IPV is mostly perpetrated by men who use their aggression to maintain power and control within the family structure. Male power is rooted in a patriarchal societal structure, which tolerates the use of violence against women as a tool for control (e.g., Pagelow, 1984). This view of IPV holds that it has a specific etiology and should be studied separately from aggression in other contexts. An influential evolutionary view of IPV (Daly & Wilson, 1980, 1988, Wilson & Daly, 1992, 1998) has similar predictions, but differs in the ultimate source of male control: in this case the male proprietary mindset is deemed to have arisen from the maladaptive consequences of raising another man's offspring.

The findings from the present study did not support the male control view of IPV, in the following ways. First, we found, as in many previous studies using unselected samples (Archer, 2000; Straus, 2011), that men were not more physically aggressive to their partners than women were. Indeed, we found the opposite, that women reported being more physically (and verbally) aggressive to their partners than men were. We also found, again consistent with many previous studies (Archer, 2004), that in the same sample men reported more physical aggression to same-sex non-intimates than women did. Thus, we added to the small number of studies (Archer, 2004, Table I; Cross & Campbell, 2012; Cross et al., 2011; Klevens et al., 2012; Swahn et al., 2008) that have demonstrated these contrasting patterns within the same sample.

Examining within-sex trends indicated that men showed lower levels of physical aggression to partners than to other men, whereas women showed higher levels of physical aggression to partners than to other women. The first trend supports the "chivalry" theory (Felson, 2002, 2006), that men are in general more inhibited in physically aggressing to a female partner than they are to another man. The findings for women would suggest that they are less inhibited in physically aggressing to a male partner than they are to another woman, perhaps because they know that chivalry will tend to prevent retaliation by a partner. This is consistent with studies showing a degree of social acceptance of women's physical aggression to partners (Harris & Cook, 1994; Simon et al., 2001; Sorenson & Taylor, 2005; Taylor & Sorenson, 2005). It also partially supports the findings of Felson, Ackerman, and Yeon (2003) who found that men are more inhibited about using violence against their wives whereas women do not have such inhibitions about violence towards their husbands.

A central prediction from the male control theory was that men should seek to control their partners' behavior to a greater extent than women would. Using a scale that involves control over various aspects of a partner's life (Graham-Kevan & Archer, 2003a, 2003b, 2005), we found the opposite for self-reports (i.e., more controlling behavior by women than by men) and no difference for victim-reports. The lack of a sex difference is consistent

with a meta-analysis of 17 studies (including the present one) that found no overall sex differences in controlling behavior (Archer, 2013, Table 11). A further prediction from the male control theory was that controlling behavior would be linked to IPV for men but not for women. Our findings did not support this, since we found that control and IPV were strongly correlated in both sexes, for both self- and victim- reports. In the regression analysis for IPV perpetration, controlling behavior was a significant predictor for both sexes, and the beta coefficients showed no sex difference. Again this is consistent with other evidence (Graham-Kevan & Archer, 2008, 2009; Hill & Yasin, 2011; Próspero, Dwumah, & Ofori-Dua, 2009) using the same measure of controlling behavior.

Felson (2002, 2010, in press) has been critical of feminist analyses (e.g., Browne, 1987; Dekeseredy, 2011) that claim IPV has a different etiology from other types of aggression. Such perspectives would predict no or low associations between IPV and aggression to same-sex non-intimates. In contrast to this, there was a moderate correlation between these two measures in the current study, which was stronger for men than for women, although in both sexes aggression to same-sex non-intimates was a significant predictor of IPV in the regression analysis. Another way of examining this issue is to measure the proportion of the sample showing both forms of aggression: this was 9.2%, and it was similar for men and women. However, over twice this percentage perpetrated IPV only and this was heavily skewed for women. These figures demonstrate both an overlap between IPV and other types of aggression, and a substantial proportion of the sample that showed IPV but not aggression to same-sex non-intimates. This was substantially greater for women than for men: there were around three times more women than men who showed IPV but no physical aggression to same-sex non-intimates. These figures reflect the previously-noted trends for men to be more inhibited in their physical aggression to a female partner and women to be more disinhibited in their physical aggression to a male partner. In general, they indicate a need to study both influences common to all forms of aggression, and those specific to IPV.

The finding that controlling behavior was associated with both IPV and aggression to same-sex non-intimates has implications for the study of aggression and control. The overlap between IPV and other forms of aggression has been noted in other studies. In their typology of "male batterers," Holtzworth-Munroe and Stuart (1994) included a "generally violent" category that involved the perpetration of both types of aggression. Marvell and Moody (1999) found that men who were violent to their female partners typically had prior criminal records. Connolly et al. (2000) found that adolescents who reported bullying their peers at school were more likely to report physical aggression to their partners. Thornton, Graham-Kevan, and Archer (2010) found that IPV and general violence showed moderate associations for both sexes in a student sample. This was also the case in a sample of women (Thornton, Graham-Kevan, & Archer, 2012). In their longitudinal study of a birth cohort in New Zealand, Moffitt et al. (2001) found that the strongest predictor for both men and women who had perpetrated IPV was their record of physically abusive delinquent behavior. Felson and Lane (2010) also observed that offenders who perpetrated IPV were similar to other offenders in terms of their criminal convictions, alcohol use and experiences of previous abuse. Other studies demonstrate that IPV and aggression to same-sex non-intimates share similar risk factors (e.g., Straus & Ramirez, 2007).

Johnson's (1995, 2005, 2006) influential typology of IPV was designed to separate dangerous forms of male violence motivated by controlling impulses from less dangerous forms of physical aggression perpetrated similarly by both sexes and not motivated by controlling impulses. The samples he initially used were selected to conform to these two categories and it is therefore no surprise that statistical analysis indicated two distinct clusters, one characterized by high male violence and control and the other by mutual, less severe, violence associated with much lower controlling motives. In our sample, which was not pre-selected in this way, cluster analysis showed that women were more likely than men to be categorized as showing high control and that the relationship between these two variables is linear (rather than forming these distinct clusters). This is inconsistent with the assertion that controlling IPV almost overwhelmingly involves male perpetrators (e.g., Johnson, 2005). Furthermore, in our sample, 7% of men and 11% of women were categorized as "intimate terrorists," that is, they were using controlling aggression against their partner in the absence (or infrequent use) of controlling behavior from these partners. Consistent with this, 13% of men and 8% of women were categorized as showing "violent resistance," that is, they were physically aggressive to their controlling partner in the absence of controlling behavior themselves. These findings provide little support for the sex composition that is typically associated with Johnson's typology: overall significance testing of the categories showed that men and women were equally likely to be categorized in any of the subtypes. Thus the contention that the control within IPV is purely patriarchal is not supported here.

The association between same-sex aggression and control was not tested by Johnson; his study of IPV was based on control having its foundations in patriarchy, the

implication from this being that control would not be related to other forms of aggression, in this study same-sex aggression to non-partners. In the present study, there were higher levels of all three types of aggression among those categorized as "high control." This provides mixed support for Johnson's typology. His typology is supported with the finding that there is more aggression found within the controlling relationships. However, for the association between control and same-sex aggression is not consistent with Johnson's theory that the origin of the aggression lies in "patriarchal control." It would appear that the use of controlling behavior and associated aggressive acts, are associated with a generally coercive interpersonal style.

The overlap we found between IPV, same-sex aggression and controlling behavior also relates to typology studies that have suggested that IPV can be part of a more generally aggressive interpersonal style (e.g., Holtzworth-Munroe & Stuart, 1994; Langhinrichsen-Rohling, 2010). This is further supported by studies of bullying suggesting that it shares similar risk factors to IPV perpetration. Corvo and deLara (2009) proposed that multiple developmental pathways can lead bullies to adult IPV perpetration, including through adolescent dating aggression. Again, this points to a coercive interpersonal style that can originate early in development.

The category analysis was consistent with previous analyses showing no (or little) sex difference in the use of controlling aggression, noted above. Indeed, both symmetry and mutual violence perpetration may be typical of most violent relationships, even those characterized by severe assaults that not only cause injury but require agency intervention (Moffitt et al., 2001; Straus, 2011). Taken together with other research, these findings therefore suggest that "intimate terrorism" is perpetrated by both sexes, and is often mutual, perhaps fitting more with the "mutual violent control" category introduced by Johnson (2006). Johnson added this category to his existing typology, along with "violent resistance," to allow the behavior of both partners to be included, moving from an individual to dyadic typology. This finding supports several studies that have demonstrated the damaging physical and psychological effects that men suffer when they are victims of an intimate terrorist partner (e.g., Hines & Saudino, 2003; Hines et al., 2007; Hines & Douglas, 2010).

Most of the current findings support the view that IPV is best studied within the context of aggression research, as advocated by Felson (2002, 2006, in press), rather than independently from it, as advocated by feminist researchers. Felson termed this a "violence perspective" rather than a "gender perspective." Although this is generally appropriate, there are some influences that may be specific to IPV, or at least to violence against women. One of these is what Felson (2002) termed "chivalry," a longstanding norm that protects women not only from other men, but also other women and other forms of threat or danger. Contrary to the feminist assertion that violence against women is tolerated in society, the norm of chivalry works to protect women and condemn those who are aggressive towards them. This argument is supported by studies of benevolent sexism (e.g., Glick & Fiske, 1996), which demonstrate that women are more likely than men to receive help (see also Eagly & Crowley, 1986); by studies finding the greater moral condemnation of violence against wives than against husbands (e.g., Felson & Feld, 2009; Harris & Cook, 1994); and also by the finding that women's violence towards their male partners is judged less harshly than men's violence towards female partners (e.g., Sorenson & Taylor, 2005).

One potential limitation of the present study is that it only involved two categories of opponent, a partner and a same-sex non-intimate. Although this can be defended on the grounds that these represent the two categories showing contrasting findings in previous studies (Archer, 2000, 2004, 2009), it is of interest to know whether it is sex of, or relationship with, the target that produces the contrasting pattern. Other studies using same- and opposite-sex opponents who were not partners have found a similar pattern to that in IPV studies in children or adolescents (Archer, 2004, Table I), suggesting that it is sex rather than relationship status that underlies the difference. In their scenario study, Cross et al. (2011) examined this issue, by using opposite sex-partner, same-sex friend and opposite-sex friend. By separating the sex and relationship status of the opponent in this way, they found that men's lower aggression to a partner was a function of sex whereas women's increased aggression was a function of relationship status. The first finding is therefore consistent with Felson's emphasis on the sex of opponent in his chivalry explanation. Cross and Campbell (2012) extended this by exploring five targets (partner; same-sex other who was known, same-sex other who was unknown, opposite sex other known and opposite sex other unknown) and supported this finding further.

A second limitation relates to the use of the sample within the current study. This sample was using a Western, undergraduate student sample. This is relevant in two ways, the first relates to generalizing across cultures. Sex differences in aggression, specifically IPV, differ in cultures that do not subscribe to Western values on the emancipation of women. Cultures that have more gender equality in terms of societal power tend to have the most parity in IPV perpetration (Archer, 2006) whereas those with more traditional patriarchal values

tend to show more male than female perpetration of IPV. Secondly, the sex differences that are reflected in the present sample in relation to IPV and controlling behavior are undoubtedly different to those that would be found in more "biased" sample such as shelter or prison samples. These samples reflect the most serious examples of this type of aggression and are biased in favor of extreme female victimization and extreme male perpetration. There are few studies of the opposite sample, owing to the lack of availability of male victimization samples (but see Hines & Douglas, 2010; Hines et al., 2007).

This study tested several predictions derived from contrasting approaches to understanding IPV with the main aim being to test the validity of the feminist and violence perspectives of studying IPV. The main findings of this study failed to provide support for the male control theory of IPV. Women were found to be more aggressive to their partners than men, whereas men reported more aggression to same-sex non-intimates than women. This contrasting pattern of sex differences within the same sample, along with the strong links between control and IPV for both men and women, support the view that IPV is best studied within the context of aggression research, as advocated by Felson (2002, 2006, in press), adopting a "violence perspective" rather than a "gender perspective."

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