Using Johnson's domestic violence typology to classify men and women in a non-selected sample

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Abstract

Tests of Johnson's typology of relationship aggression have so far been restricted to composite data from women reporting on their own and their partner's behaviors. Such samples have included sampling techniques believed to result in bias towards reports of male violence towards women. This study assessed whether the typology would be found in a sample of 1350 respondents unselected for partner violence. Measures of physical aggression and its escalation, injuries, and control, were obtained from both victims and perpetrators. Replicating previous methods it was found that a simple two-cluster solution failed to create the distinct categories found previously. A three-cluster solution was found to improve the discriminatory ability. Partner reports were found to produce a clearer typological profile than self-reports.

Although several earlier studies (e.g. Riggs, 1993; Rouse, 1990; Vivian & Langhinrichsen, 1994) suggested typologies for men who are physically aggressive to their partners, only Johnson (1995) addressed the need to reconcile the findings of feminist and family violence researchers in this area. Feminist research, beginning in the 1970s, developed a sociopolitical theory of male coercive violence towards women based on accounts of women who sought help from women's shelters. This approach has been extremely influential in clinical spheres, and has lead to its widespread adoption for batterer treatment programs, where models such as Duluth (Pence & Paymar, 1993) have become the norm. In many US states referral is contingent upon certification standards derived from this model (E. Dunning, personal communication, August 3, 2002).

There is, however, a large body of research that calls into question such an approach. The work of family violence researchers, such as Murray Straus and Richard Gelles, adopt a conflict, as opposed to coercive, approach to violent relationships. A conflict approach views acts of physical aggression as tactics used in response to a conflict. This is in contrast to a coercive approach, which views physical aggression as a means of maintaining control over another person. The conflict approach has been extremely influential in research on relationship aggression. Using act-based measures such as the Conflict Tactics Scale (CTS: Straus, 1979) to measure aggression, it has found that men and women are equally likely to use physical aggression (Archer, 2000).

Johnson (1995; Johnson & Ferraro, 2000) proposed that the apparently conflicting findings of feminist and family violence researchers were due to the divergent populations each sampled. He argued that there were two distinct forms of aggressive

relationship, which he termed 'patriarchal terrorism' and 'common couple violence'. Common couple violence occurred occasionally when conflict got out of hand, usually consisting of minor acts of aggression enacted by either partner. Patriarchal terrorism, in contrast, was a form of violence used by men to control their partner. The heart of this distinction is that patriarchal terrorism is not merely a more extreme form of common couple violence, but is a qualitatively different phenomenon. Johnson argued that patriarchal terrorism was evident in data from police and hospital records, and from women's accounts of men's violence obtained from shelters. These accounts converged to paint a picture of frequent physical aggression by men towards women, who in turn were at substantial risk of injury. Common couple violence was apparent in non-selected samples such as general population surveys and undergraduates. These respondents told of low frequency aggression perpetrated by both men and women, which rarely resulted in injury.

These two types of relationship aggression differed on dimensions other than frequency of physical aggression. Johnson identified escalation of physical aggression as an area of contention between family violence and feminist researchers. Walker (1989) encapsulated the feminist position on escalation when she wrote "violence between intimate partners always gets worse..." (p.697). However, this is not consistent with family violence research, which finds no such pattern of escalation: indeed there is some evidence from longitudinal studies that violence actually decreases over the course of a relationship (e.g. Morse, 1995; O'Leary, Barling, Arias & Rosenbaum, 1989). Johnson also indicated that the use of controlling behaviors would discriminate between patriarchal terrorism and common couple violence. He stated "It is important not to make

the mistake of assuming that this pattern of general control [characteristic of patriarchal terrorism] can be indexed simply by high rates of violence" (p.287). Johnson predicted that the patriarchal terrorist would use a combination of controlling behaviors, of which violence is but one form, to control his partner. Partners in the common couple violence groups, in contrast, were not viewed as using physical aggression within a general control framework. Since Johnson's paper, authors from both perspectives have recommended adopting a differentiated approach to the studying and treatment of aggression in relationships (e.g. Dasgupta, 1999; Hamby, Poindexter & Gray-Little, 1996).

There is a need to investigate further the possibility that there are clearly delineated typologies. The strength of Johnson's distinction is that he set out a priori dimensions of divergence that could be operationalized and investigated empirically. Johnson (1999) presented analyses of data collected by Frieze in the 1970s. Frieze interviewed a sample of women known through contact with shelters or the justice system to be, or have been, involved in a violent relationship. She then interviewed one neighbour of each violent couple. Therefore the sample was known to contain women from relationships representing shelter populations and those more representative of the general population. Johnson first classed respondents as high or low in their use of controlling behaviors, and whether or not they used physical aggression. At this point it became apparent that the distinction he had previously made related only to one member of a relationship, and that he needed to be able to place different types of aggression within a dyadic context. He therefore classified people on the basis of their own and their partner's use of control and aggression. Common couple violence (CCV) occurred when one or both members of the relationship used non-controlling physical aggression;

patriarchal terrorism (renamed 'intimate terrorism': IT) occurred when the respondent used controlling aggression and their partner used either no physical aggression or non-controlling aggression. Two new categories, violent resistance (VR) and mutual violent control (MVC), were created. VR occurred when a partner of an intimate terrorist used non-controlling physical aggression. Although it is akin to self-defence, Johnson and Ferraro (2000) regarded such a term as being too restrictive. Although VR can be self-defensive in the legal understanding of the word, it is not confined to this context, and the dynamics are not clear, as little research has been conducted on this group. MVC couples are essentially two intimate terrorists battling for control: again this group is under-researched and therefore ill-defined.

Using cluster analysis, Johnson (1999) categorized relationships involving physical aggression as CCV (55% male, 45% female), IT (97% male, 3% female), violent resistance (VR) (4% male, 96% female), or mutual violent control (MVC) (50% male, 50% female). These types of relationship aggression were then identified as belonging to either a general survey sample (90% CCV) or a shelter sample (74% IT / VR). Johnson then compared male IT and CCV samples on measures of escalation of violence, severity of male violence (as indexed by injuries sustained by female partners), mutuality of violence, and frequency of violence, all on the basis of female partners' reports. He found that relationships labeled IT were more likely than those labeled CCV to have involved escalated levels of aggression, more injurious aggression, and disproportionate levels of aggression between partners. Johnson did not, however, find that victims of IT were any less likely to aggress than were partners in CCV relationships.

Johnson and Leone (2000) presented an analysis of data from the National Violence Against Women Survey (NVWS: Tjaden & Thoennes, 1998) again using only women's reports. Using the same classification techniques as Johnson (1999), they classified IT and CCV only. They found a surprisingly high number of ITs, with 35% of husbands' violence being so classified, contrasting with 10% in the previous study. This high number was attributed to the way the questions were framed in the NVAWS, which was a survey emphasizing women's personal safety. They found that on average IT was significantly more frequent, more likely to escalate, and more severe than CCV. However, there was wide variation in scores. IT victims were significantly more likely to have suffered an injury and to have suffered post-traumatic stress disorder, depression, disruption of daily activities, and to have left their partner due to violence.

Graham-Kevan & Archer (2003a) used a stratified sample of women in domestic violence shelters, male and female students, and male prisoners. Using Johnson's classification techniques, those who were in a relationship that involved physical aggression were categorized as IT, CCV, VR, or MVC. Twenty two percent of the sample were ITs , with 87% of these being male, and 68% being identified through the shelter sample. CCV was gender-neutral (45% men), with the majority being identified through non-selected samples. VR was predominately female (90%), with 70% being found in the shelter sample. MVC was equally likely to be perpetrated by men or women, and was most frequently identified through the male prison sample (31%). Analysis of IT and CCV provided further support for Johnson's typology. In comparison with CCV perpetrators, ITs showed a profile of significantly higher frequency physical aggression

that was more likely to result in injuries to their partners, and to have escalated over the course of the relationship.

Previous research has therefore found support for the distinction between IT and CCV. However Graham-Kevan & Archer (2003b) have cautioned against generalizing these findings to a general population. All research to date has used a sample that includes either known female victims of male violence (Johnson, 1999; Graham-Kevan & Archer, 2003b) or samples drawn from crime surveys of women's victimization (Johnson & Leone, 2000). These sampling methods may in themselves at least partially explain the previous findings. The populations sampled are likely to contain highly victimized women but unlikely to equally represent highly victimized men. Further, an optimal two-cluster solution may be an artefact of the dichotomized sampling procedures (highly victimized women versus populations not selected for high rates of violence). There is, therefore, a need to investigate the differences (if any) between IT and CCV in a sample that is large enough to access sufficient numbers of IT and CCV relationships. The sample must contain both men and women who report on both their perpetration and victimization, to allow a true investigation of sex differences. Further, this sample must not contain a sub-sample selected to represent highly victimized women (or men), as such methods negate any meaningful analysis of sex differences in the frequencies of typology membership. To investigate sex differences fairly, both men and women must have an equal a priori chance of being classified within Johnson's typological categories, which was not the case in previous studies.

It is clear that the data-set necessary for distinguishing between IT and CCV must include not only rates of physical aggression for both self and partner, but also

information on the use of different types of controlling behaviors. The current data, unlike the earlier data-sets used in Johnson's (1999; Johnson & Leone, 2000) analysis, but similar to that of Graham-Kevan & Archer (2003b), was collected specifically to discriminate between IT and CCV. Hence it is ideally suited for the following analysis, which both replicates and extends the analysis performed by Johnson (1999) and Graham-Kevan & Archer (2003b).

The use of self-reports of aggression in conjunction with partner-reported rates may lead to bias. Studies have found that male batterers and their partners agree on the frequency of aggression women perpetrate but differ significantly in reports of male perpetration, with women reporting higher rates than men (Barnett, Lee & Thelen, 1997; Claes & Rosenthal, 1990; R.P.Dobash, Dobash, Cavanagh & Lewis, 1998; Okun, 1986). Whether this was due to underreporting by men or inflation by women cannot be ascertained, although men described as batterers have been found to show signs of socially desirable responding, unlike their partners (Dutton & Hemphill, 1992). Such effects, however, are not yet fully understood (Sugarman & Hotaling, 1997). For community and student samples, a meta-analysis has found that self-reports are consistently lower than partner-reports for both sexes (Archer, 1999) and that men under-report their aggression more than women do. Therefore the following analysis will involve separate comparisons, using self-reports and partner-reports.

To be consistent with previous studies, each respondent and their partner had to be classified as using either: 1) no physical aggression (NPA), 2) non-controlling physical aggression (NCPA), or 3) controlling physical aggression (CPA). The relationship could then be classified as: 1) non-physically aggressive, where neither

partner uses physical aggression; 2) CCV, where non-controlling physical aggression is used by one or both partners; 3) IT, where the respondent uses CPA, and their partner uses either NPA or NCPA; 4) VR, where the respondent uses NCPA, and their partner uses CPA; 5) MVC, where both spouses use CPA. Classification was based on the frequency of use of controlling behaviors and whether any acts of physical aggression had been used. The initial analysis identified the above relationship characteristics, and subsequent analysis involved only relationships where physical aggression played a part (therefore all 'non-physically aggressive' relationships were omitted).

Previous studies had sampled from two (or more) populations believed to contain disparate levels of physical aggression. Therefore subsequent analyses would be biased towards a two-cluster solution. However, in the present sample there are no subpopulations selected for their high rates of physical aggression, and therefore there are no cases that can be expected to move the scores on the controlling behaviors measures towards the more extreme end of the spectrum. It is therefore possible that a simple high / low dichotomy will result in misclassification of IT (and hence VR and MVC also), with too many respondents being labeled as such when in fact their level of controlling behaviors are not sufficient to warrant this. As IT is meant to represent the extreme end of the controlling behaviors continuum, a three-cluster solution may be more appropriate for general populations. In the present study, classifications of IT and CCV using a two and three cluster solution were compared on the dimensions of frequency of physical aggression, injuries and escalation, to determine which (if any) showed the expected profile of distinct IT and CCV categories. The distribution of the sexes within Johnson's relationship categories was also investigated.

Method

Participants

Participants were recruited via an email request sent to full and part-time students and staff at the University of Central Lancashire. Respondents were told that the study concerned how couples in heterosexual relationships influenced each other. In common with adverts posted on notice boards or in newspapers, it is not possible to calculate a response rate to the email request as it is not clear how many people read it. Of those who responded 5% failed to complete the questionnaire and 1339 people provided usable data. Respondents were asked to complete the online questionnaire by answering all items in relation to their present or most recent heterosexual relationship that had lasted more than one month. Respondents who had not had a heterosexual relationship of one month or more were not included in this study (41 were excluded). Their mean age was 25.3 years (*SD* = 9.3; range 16-60), and the mean age of their partners was 26.9 years (*SD* = 9.7, range 16-60). The mean length of their relationships was 20 months (*SD* = 14.6). The respondents also rated their socioeconomic status: 11% considered themselves upper-middle class, 46% middle, 30% lower-middle and 11% lower class.

Materials

Controlling behaviours. The CBS-R was developed by the authors based on the Duluth Domestic Abuse Intervention Project (DAIP: Pence & Paymar, 1993). The DAIP literature cites examples of controlling behaviors consistently reported (by both victims and perpetrators) as being used by violent men against their partners. It has been showed to have good discriminative ability (Graham-Kevan & Archer, 2003a). The CBS-R uses

behavioral categories. The CBS-R can be scored to derive a mean overall controlling behaviors total, or five subscores, each of which is a particular type of control tactic (see Appendix). The subscales are 'Using Economic Abuse' (items 1-4), 'Using Coercion and Threats' (items 5-8), 'Using Intimidation' (items 9-13), 'Using Emotional Abuse' (items 14-18), 'Using Isolation' (items 19-24). Crohbach's alpha for partner (P) and self (S) reports were: economic, P: α = .58, S: α = .45; coercion and threats, P: α = .72, S: α = .70; intimidation, P: α = .74, S: α = .62; emotional abuse, P: α = .81, Ss α = .75; isolation, P: α = .88, S: α = .84. The respondents used a 5-point response format to indicate how often during the past year with their partners, they had used each behavior, the anchors ranged from 0 never to 4 always.

Physical aggression. A modified version of the CTS (Straus, 1979) was used to measure the occurrence and frequency of physical aggression. The last two items of the physical aggression scale were changed so that they read "threatened with a weapon (e.g. a knife)" (item q) and "used a weapon (e.g. a knife)" (item r). This modification was used as the UK has strict gun controls and therefore guns are less likely to be available during domestic arguments than they are in the US. The CTS has good internal consistency (Straus, 1990), and is sensitive enough to discriminate between different samples (Archer, 2000; Graham-Kevan & Archer, 2003a). Only the 8-item physical aggression sub-scale was used. The response format was a 5-point frequency scale with never, rarely, sometimes, often, and always as anchor points (see Graham-Kevan & Archer, 2003b for a discussion of this response format). When scoring the items, the frequency of each provided scores for each act. The mean of the frequency of each act was added together to obtain a total physical aggression score (items k-r). Cronbach's alpha for total

physical aggression was .85. Respondents were required to report the frequency with which they and their partner had used each act of physical aggression in the past year. The response range was 0-4 for both the individual items and the total physical aggression score.

Level of escalation. Level of escalation was assessed by an item at the end of the physical aggression and injury items. One item asked: "During the time you and your partner have been / were together, has the use of physical force increased, stayed the same or decreased?" Responses were coded as 1 (decreased), 2 (stayed the same), or 3 (increased), for both self and partner.

Severity of violence. Severity of violence was assessed by one item (Morse, 1995). The respondents used a 5-point response format to indicate how often during conflicts with their partners in the last year they had been injured, the anchors ranging from 0 (never) to 4 (always). The items were introduced by the following sentence: "Regarding the past year with your partner, or the last year you were with your partner, how many times were you and your spouse/partner physically injured, e.g. knocked down, bruised, scratched, cut, choked, bones broken, eyes or teeth injured?

Results

Unlike previous typologies (Graham-Kevan & Archer, 2003b; Johnson, 1999, 2000) the present sample allows reports about self and partner behavior to be contrasted. A series of one-sample t-tests revealed self-reports of controlling behaviors to be significantly lower than the respondents' reports about their partners' behaviors (Table 1), which is consistent with previous research on physical aggression (Archer, 1999; 2002). Therefore the present analysis will not artificially construct the data set by using

both self and partner report as if they were self-reports, as was the case in the previous research cited above.

The proportion of women and men using any act of physical aggression towards their partners was as follows: from self-reports, 29% for women and 17% for men, and from partner reports 31% for women and 22% for men. Therefore in the present sample women are significantly more likely to use one or more acts of physical aggression than are men, based on both self ($\chi^2 = 23.00$, $df = 1$, $p < .0005$) and partner reports ($\chi^2 = 11.35$, $df = 1$, $p = .001$).

Cluster Analysis of Controlling Behaviors Profiles

K-means cluster analysis was conducted using SPSS version 11 to code individuals as either high or low on the five types of controlling behaviors: economic, threats, intimidation, emotional abuse, and isolation. Separate cluster analyses were run for self and partner reports. Two and three cluster solutions were analyzed, using Euclidean distance as a measure of dissimilarity. In each case the participant's and their partner's cluster membership were saved as variables. The 3 cluster solutions were collapsed from 3 to 2 categories with lowest and middle control categories forming the "low control" category and highest forming the "high control" category (the meaning of the clusters is apparent by comparing the mean values on each of the five types of controlling behaviors in Table 2).

Two Forms of Physical Aggression: Controlling and Non-controlling Physical Aggression.

The occurrence of partner physical aggression for both high and low control clusters and the frequencies of controlling and non-controlling physical aggression were

calculated: physical aggression was treated as a discrete variable, with those who had used *any* act of aggression being classed as physical aggressive. The frequencies in Table 3 show that, consistent with previous studies, there are individuals who have used physical aggression against their partners in both the high and low control clusters. However, the proportions are dissimilar for the two-cluster solution but similar for the three-cluster solution to those found by Johnson (1999) and in Graham-Kevan & Archer (2003b). Overall there were 307 physically aggressive individuals in the present sample: of these, 49% in the 2 cluster solution (2 cluster) and 21% in the 3 cluster solution (3 cluster) were high controllers, compared to 27% in Graham-Kevan & Archer (2003b) and 32% in Johnson (1999).

The classification procedure involves individual's data about their own, and their partners' behaviors, therefore two separate sets of analyses were conducted. The first compared relationship behaviors using self-reports and the second using partner-reports. For example using self-reports, the ITs' frequency of using physical aggression was derived from self-reports of those classified as IT. However, using partner-reports, ITs' frequency of using physical aggression was derived from reports by victims of ITs of their IT partners' behavior.

The respondent and their partner were coded as using no physical aggression (NPA), non-controlling physical aggression (NCPA) or controlling physical aggression (CPA). As with previous analyses, if neither party used any physical aggression the relationship was called NPA. Dyads where only NCPA was used (by one or both partners) were labeled common couple violence (CCV). Dyads where the respondent used NCPA and their partner used CPA were labeled violent resistance (VR). Dyads

where the respondent used CPA and their partner used no physical aggression or NCPA were labeled intimate terrorism (IT). In previous analyses, the data sets were artificially constructed, with half of the cases used in the analysis being true self-reports and the other half being reports about partners (see Graham-Kevan & Archer, 2003b and Johnson 1999). Only those who had used physical aggression were then used for subsequent analysis: therefore only those victims of IT who used physical aggression themselves were investigated in these samples. As the present study did not follow this procedure, a further category was required for respondents who were non-physically aggressive but whose partners used CPA. It was decided to name this category 'victim of intimate terrorism' (VIT). Dyads where both the respondent and their partner used CPA were called mutual violent control (MVC).

It is apparent that the present sample has a greater proportion of nonviolent relationships than previous samples, which is consistent with a sample that contains no respondents selected for the presence of high levels of physical aggression in their relationship. All other categories varied with cluster solution (see Table 4). Within the sub-sample of relationships that contain physical aggression (n = 375) MVC is far more frequent with a 2 cluster solution, than with a 3 cluster solution, with the value for 3 cluster being more consistent with previous studies. IT is consistent in the 2 cluster with the findings in Graham-Kevan & Archer (2003b), whereas in the 3 cluster, it is consistent with Johnson (1999). VR did not differ for cluster solution. VIT occurred at similar proportions to VR (this category could not be compared to previous studies as it was new). The 2 cluster proportion of CCV was more similar to previous findings than was the 3 cluster.

Sex and Physical Aggression

The sexual symmetry / asymmetry of the categories was investigated. Previous research found that IT was perpetrated primarily by men, and VR by women, and that CCV and MVC would be sex-symmetrical. VIT would be expected to be female from previous research. Table 4 presents the frequencies of each type of relationship by the sex of the individuals. Contrary to expectations we find that women are more likely, in relation to other women, to be classed as IT than are men in the 2 cluster, and equally likely in the 3 cluster solutions. Surprisingly VIT is predominantly male, with twice as many men being classified as VIT than would be expected with a random distribution: this is the case for both 2 cluster and 3 cluster solutions. CCV, VR, and MVC were found to be relatively sex-symmetrical, which in the case of VR was not predicted. To investigate the similarity of the 2 cluster and 3 cluster solutions to previous research, the subsequent analyzes centered on self-reported perpetration of IT and CCV only.

Characteristics of Intimate Terrorism and Common Couple Violence for both Males and Females

Perpetration of Acts of Physical Aggression

Previous research has found IT to involve more frequent physical aggression than does CCV. Therefore the frequencies of perpetrating minor and severe physical aggression against partners were compared across sex and relationship type for both the 2 and 3 cluster solutions.

Two cluster solution. A sex x relationship type (IT and CCV) ANOVA on the perpetration of minor acts of physical aggression showed there was no significant main effect for relationship type ($F(1,252) = 3.71$, $p = .055$), or sex, ($F(1,252) = 2.43$, $p = .12$).

There was no significant interaction between relationship type and sex ($F(1,252) = 0.00$, $p = .99$). Similarly, a there was no significant main effect for relationship type ($F(1,252) = 2.23$, $p = .14$), or sex ($F(1,252) = 0.69$, $p = .41$), and there was no significant interaction ($F(1,252) = 0.14$, $p = .71$), for perpetration of severe acts of physical aggression.

Three cluster solution. A sex x relationship type ANOVA on the perpetration of minor acts of physical aggression showed a significant main effect for relationship type, ($F(1,316) = 6.74$, $p = .01$), with IT (mean = 0.89) using significantly more minor physical aggression than CCV (mean = 0.49), and there was a significant main effect for sex ($F(1,316) = 11.89$, $p = .001$), with women (mean = .63) reporting using more minor physical aggression than men (mean = .34). There was no significant interaction between relationship type and sex ($F(1,316) = 1.70$, $p = .19$).

A sex x relationship type ANOVA on the perpetration of severe acts of physical aggression showed there was no significant main effect for relationship type ($F(1,316) = 1.02$, $p = 31$), or sex ($F(1,316) = 0.39$, $p = .54$), and there was no significant interaction between relationship type and sex ($F(1,316) = 0.27$, $p = .60$).

In summary, the 2 cluster solution showed no significant differences between IT and CCV in their reports of minor and severe physical aggression. For the 3 cluster solution, ITs reported significantly more acts of minor, but not severe, physical aggression than CCVs. This effect was not mediated by respondent sex, although women overall reported using more minor acts of physical aggression than did men.

Escalation of Physical Aggression

ITs are expected to be more likely to escalate their use of physical force than are CCV individuals. To investigate the relationship between escalation and relationship

type, frequencies of escalation (*deescalated, no change, and escalated)* were calculated (Table 5). There was no significant difference between IT and CCV across these three categories for either the 2 cluster ($\chi^2 = 1.18$, $df = 2$, $p = .28$), or the 3 cluster ($\chi^2 = 1.44$, $df = 2$, $p = .24$). However, the small cell sizes mean that these results need to be interpreted with caution

Injuries Inflicted on Partners

Severity of physical aggression was indexed by examining injuries to partners. The frequencies for injuries to partners by relationship type are presented in Table 6. The 2 cluster solution yielded no significant difference between IT and CCV injuries ($\chi^2 = 2.01$; $df = 1$, $p = .16$). With the 3 cluster solution, ITs were found to inflict significantly more injuries than CCVs ($\chi^2 = 4.70$; $df = 1$, $p = .03$).

Reciprocity of Physical Aggression

In order to investigate the reciprocity of physical aggression frequencies of uni- and bi-directional use of physical aggression were calculated (Table 7). Chi-Square analysis revealed that IT relationships were no more likely to be one-sided than CCV relationships for the 2 cluster solution ($\chi^2 = 0.57$, $df = 1$, $p = .45$), and actually more likely to be mutual than the CCV in the 3 cluster solution ($\chi^2 = 9.40$, $df = 1$, $p = .002$).

Relative Rates of Perpetrator and Partners use of Physical Aggression

To investigate perpetrator and victim use of physical aggression further, the relative couple frequency of use of physical aggression, calculated by subtracting the reported self physical aggression score from the reported partner physical aggression for each dyad were calculated (Table 8). An independent samples t-test revealed that ITs used significantly more physical aggression relative to their partners than CCV did for

both the 2 cluster ($t(254) = -4.55$, $p < .0005$), and the 3 cluster solution ($t(318) = 3.05$, $p = .002$). It is important to remember that Johnson's (1999) definition of ITs stated that they used high levels of a range of controlling behaviors and *one or more* acts of physical aggression. Therefore, although it is expected that such individuals would use high frequencies of physical aggression than CCVs it is not a prerequisite.

Summary of Analysis

Using self-reports to classify relationship category, the present study found support for the use of a three-cluster, rather than two-cluster, solution within this population. The three cluster solution fitted the expected profile of significantly higher levels of minor aggression perpetration, inflicting injuries and higher levels of physical aggression relative to their partners for the IT sample when compared to the CCV sample. The two cluster solution only yielded one significant difference between the IT and CCV samples (relative frequency of physical aggression). However there were no differences between severe physical aggression, escalation or reciprocity of physical aggression even in the three-cluster solution.

The preceding analysis investigated IT and CCV based on a sample that was classified by self-reports. Therefore where the respondent used controlling aggression and their partner used no aggression or non-controlling aggression that relationship was classed as IT and the analysis was from the perpetrator's perspective. This type of data is relevant for those working with perpetrators of partner aggression such as batterer-program clinicians. Using perpetrator reports enabled us to assess the level of controlling behaviors reported and hence classify the type of relationship.

Previous research that developed the present methodology used data derived from a composite of self and partner-reports. However, this is problematic for two reasons: first, as discussed previously, there is likely to be a reporting bias (Archer, 1999). Sampling procedures used in previous research have ensured that much (Graham-Kevan & Archer, 2000b) or all (Johnson, 1999; Johnson & Leone, 2000) of the information on IT has come from reports about a partner's behavior. This study and previous research has, however, found consistent differences in self and partner reports that may explain why the present study only found partial support for Johnson's hypothesis. In addition, the effect of the source of information on classification cannot be investigated. This is important as many practitioners and researchers use victims to provide information on the perpetrator's behavior. Therefore it is important to establish typologies from both perspectives.

With this in mind, it was decided that partner reports of IT would be contrasted with partner reports of CCV. For this purpose, VIT and VR provided data on IT, and CCV provided data as before with the exception that in the previous analysis the behaviors contrasted were self-reports of perpetration of physical aggression, escalation and the respondents' infliction of injuries to their partners. Therefore the following analysis instead used reports of the respondent's partner's use of physical aggression, escalation, and the respondents' sustaining injuries due to their partners' physical aggression. As we were interested in comparing IT and CCV, the VR and VIT categories were collapsed, so that reports about IT derive from a combination of VIT and VR individuals. In the interest of brevity, only the 3-cluster solution will be used for the

subsequent analysis. Further, results will be compared to the self-report 3-cluster findings only.

Using partner-reports to compare IT and CCV Victimization by Acts of Physical Aggression

A sex x relationship type ANOVA on the victimization of minor acts of physical aggression showed a significant main effect for sex ($F(1,311) = 16.7$, $p < .0005$), with men (mean = 1.28) reporting their partners as using significantly more minor physical aggression than woman did (mean = 0.79). There was also a significant main effect for relationship type ($F(1,311) = 84.2$, $p < .0005$), with ITs being reported to use significantly more minor physical aggression (mean = 1.58) than CCVs (mean = 0.45). There was no significant interaction between relationship type and sex ($F(1,311) = 2.59$, $p = .11$). A sex x relationship type ANOVA on the victimization of severe acts of physical aggression showed a significant main effect for sex ($F(1,310) = 12.4$, $p <.0005$), with men reporting more victimization (mean = 0.54) than women (mean = 0.23). There was a significant main effect for relationship type ($F(1,310) = 21.1$, $p < .0005$), with ITs being reported as using significantly more severe physical aggression (mean = 0.59) than CCVs were reported to have used (mean = 0.19). There was no significant interaction between relationship type and sex ($F(1, 310) = 1.84$, $p = .18$).

The findings for partner's use of minor aggression are similar to those for self-reported minor physical aggression. Both self-reports and partner reports were consistent in that women used more minor physical aggression than men. Unlike self-reports, partner reports also found significant differences between CCV and the victims of IT (i.e.

VIT and VR) in the predicted direction. Men again were found to report more severe physical victimization than did women.

Escalation of Partner's Use of Physical Aggression

It was expected that ITs would be more likely to escalate their physical aggression than would CCVs. Chi Square analysis found that victims of IT were significantly more likely to face escalating rates of physical force than were victims of CCV, as discussed previously ($\chi^2 = 7.33$, $df = 2$, $p = .026$: Table 5). This is in contrast to the analysis based on self-reports, which failed to find a significant difference (Table 5).

Injuries Sustained by Victims

Severity of physical aggression was assessed by injuries to respondents. The frequencies for injuries to respondents by relationship type are shown in Table 6. Consistent with self-reports, victims of IT were found to sustain significantly more injuries than CCV victims ($\chi^2 = 28.96$; $df = 1$, $p < .0005$).

Reciprocity of Physical Aggression

In order to investigate the reciprocity of physical aggression frequencies of uni- and bi[1]-directional use of physical aggression were calculated (Table 7). Chi-Square analysis revealed that victims of IT were no more likely to be one-sided than CCV relationships ($\chi^2 = 0.70$, $df = 1$, $p = .40$), which is in contrast to the results for self-reports, which found that ITs were more likely to show mutual aggression than were CCVs.

Relative Rates of Perpetrator and Partners Use of Physical Aggression

Again by subtracting the self-reported physical aggression score from the reported partner's physical aggression for each dyad, relative rates of physical aggression were calculated (Table 8). An independent samples t-test showed that victims of IT used

significantly less physical aggression relative to their partners' than did CCVs ($t(313) = 3.96$, $p < .0005$).

Summary of Analysis of Partner-reports

Using reports about the respondent's partner's behaviors and their consequences, the relationship profile of IT was far more similar to that found by previous research than the analysis based on self-reported behaviors. Analyses derived from partner reports found that IT perpetrators manifested significantly higher rates than those classified as CCV, for minor and severe acts of physical aggression, relative rates of physical aggression, and injuries. Their physical aggression was also significantly more likely to escalate than was that of CCV respondents.

Discussion

The present study investigated Johnson's typologies in a population not selected for their high rates of men's physical aggression towards their partners. Although previous research has found support for Johnson's typologies using a two-cluster solution, the nature of the samples made generalization problematic. Claims had also been made about the sexually asymmetric the nature of IT and VR (which would also include VIT). These claims, however, may be confounded by the sampling strategies used. The aim of the present study was twofold. First to investigate whether Johnson's procedure of using cluster analysis to classify types of individual physical aggression would result in profiles that differed statistically from one another on predicted dimensions, in a population not containing any individuals selected as manifesting high levels of physical aggression. The second aim was to investigate the distribution of membership by sex in the categories of relationship identified by Johnson (1999).

Analysis based on self-reports of IT and CCV found support for a three-cluster solution, rather than two as recommended by Johnson (1999). A three-cluster solution results in levels of controlling behaviors in the high control category that are at least a third higher on average than those in the two-cluster high control category. In the three-cluster (two-cluster in parenthesis) solution high controls use economic control three times more frequently than low controllers (two times more), eight times more threats (four times more), four times more intimidation (three times), three times more emotional (three times), and three times more isolation (three times). However the true support for a three rather than two-cluster solution comes when one compares them on dimensions predicted to differentiate IT and CCV. Here the three-cluster solution shows far better discriminatory ability than the two cluster solution, with the IT groups producing effects in the predicted direction in three out the six analyses conducted, compared to only one in the two-cluster solution.

Although the non-significant effect of mutuality has been found in previous research (Johnson & Leone, 2000), the failure to find significant differences in severe physical aggression and escalation calls into question the veracity of Johnson's distinction and the generalizability of previous findings (Johnson, 1999; Johnson & Leone, 2000; Graham-Kevan & Archer, 2003b). However, such distinctions and findings may be contingent on the information being provided by a victim rather than a perpetrator of such behaviors. To investigate this possibility, the six analyses were repeated using victims' reports of their partners' behavior, with relationships classified using a three-cluster solution. Out of the six analyses, there were five significant effects in the predicted direction (the exception being mutuality). This finding provides both support

for, and caveats against, the robustness of Johnson's typological distinctions. From our study's findings, one would expect Johnson's typologies to be evident in data derived from victim reports, and so it would be a useful tool for professionals and academics to differentiate between types of relationship aggression. The same may not, however, be true of perpetrator's reports. The fact that the typologies may be contingent on using victim rather than perpetrator reports has important practical and theoretical implications. Practitioners must take care when using only one member of a relationship dyad (whether male or female) to provide information on both their own and their partner's behavior.

These findings suggest that research that has used single-sex samples to provide information on their own and opposite-sex partner's aggressive behaviors may have drawn conclusions about sex differences when in reality the effects were driven by self versus partner report bias. Johnson proposed, and found evidence for, the asymmetric nature of IT and VR (Johnson, 1999; Johnson & Leone, 2000), with men being perpetrators and women being victims of controlling physical aggression. However all previous analysis conducted by these researchers used only reports from women about their own perpetration and victimization, even when reports from men were available (Johnson & Leone, 2000). Research reported in previous analyses (Graham-Kevan & Archer, 2003b) suggested that the use of both men's and women's reports of perpetration and victimization may affect the distribution by sex within typology categories, although the non-selected sample used was too small to allow investigation of this. The present sample was large enough to allow a meaningful investigation of the distribution of men and women within the different categories of aggressive relationships. Here, contrary to Johnson's predictions, it was found that IT and VR were essentially sex-symmetrical and,

that nonviolent victims, i.e. those who do not use any physical aggression towards a physically aggressive partner, of IT were more likely to be men than women.

If replicated in future studies, these findings have far-reaching implications. They provide support for researchers, such as Steinmetz (1978) and George (1994; 2003), who have claimed that not only can men as well as women be mutually victimized in intimate relationships, but also that men can be victims of 'battering' in the same way that women can. These conclusions are in direct contrast with feminist analyses, which have discounted such claims by asserting that men use controlling aggression and women use no (or more recently, self-defensive) aggression (R.P. Dobash & Dobash, 1979; R.P. Dobash et al., 1998; Giles-Sims, 1983; Okun, 1986; Pence & Paymar, 1993; Saunders, 1988; Stacy, Hazlewood & Shupe, 1994; Walker, 1979; Yllö, 1994). However, the present findings are supported by research that has investigated men's victimization (George, 2003; Statistics Canada, 2000; McFarlane, Willson, Malecha, & Lemmey, 2000; Migliaccio, 2002; McLeod, 1984).

The invisibility of female victims of domestic abuse before the 1970s did not reflect a lack of such victims, only a lack of awareness. With that lack of awareness, perception of an absence of sanctions (both formal and informal) towards male perpetrators was fostered. One could propose then that, in its failure to address female victimization, society was implicitly supporting such abuse (although a lack of overt support had been evident for some time). This does not now appear to be the case, at least among western nations, where women have a measure of societal power (Archer, 2003). Male victims may currently find themselves in a similar position to that of women victims pre-1970. The lack of a political advocacy and the strong resistance of many

women's groups may be obscuring the existence of male victims of women's aggression. This invisibility is then used as evidence that such victimised men do not exist (R.P. Dobash, Dobash, Daly & Wilson, 1992; Semple, 2001).

The analyses presented in this paper suggest that Johnson's (1999) typologies have some utility. However, his approach has been found to be sensitive to reporting and sampling effects. Future studies should refrain from using stratified sampling techniques to study sex differences unless such techniques include comparable samples for men and women. Further, self-reports and partner-reports cannot be viewed as synonymous and therefore they must not be used together uncritically. For researchers using a stratified sampling technique such as that used by Johnson (1999) and Graham-Kevan & Archer (2003b), a 2-cluster solution may be optimal. However, where the sample does not contain a mixture of selected and non-selected samples a 3- cluster solution may be preferable. Johnson's typologies may need to be redefined to encompass the failure to find that IT is more likely to be one-sided than CCV in non-selected samples. It may be that mutuality is found to be a crucial element in IT experiences, with one-sided aggression being the norm in selected, and mutual aggression in non-selected samples. The [female] victims found in selected samples may tend to be people who either reject the use of violence and seek help sooner, or whose non-violence is a sign of extreme fear resulting from the dangerousness of their aggressors. An alternative explanation is that they don't report their own aggression because of their self-definition as victims and not aggressors. Mutuality in non-selected IT relationships may signify that either both parties condone the use of physical aggression, thereby legitimising its use, or that the victim is less afraid of the IT aggressor and is willing to fight back.

The present dominance of the socio-political/pro-feminist approach to domestic violence intervention programs in the US (White & Gondolf, 2000), and to a large extent other western nations such as the UK and the Netherlands, may need to be addressed. The large drop-out and reassault rates for perpetrators in such programs may be due to treatment being tailored to the minority of perpetrators who fit that label of 'patriarchal men'. Whereas the majority of perpetrators are failing to get their criminogenic needs met, thus bringing into question the appropriateness of a 'one size fits all' philosophy, particularly with the increasing number of women being arrested for domestic assault. Recently clinicians in the US have shown an interest in Johnson's work (S.H. Dempsey, personal communication, October 10, 2003; E. Dunning, personal communication, August 3, 2002) and have sought research on his typologies. Therefore, our research is timely as both the strengths and limitations of Johnson's work need to be investigated. The implications for the diagnosis and treatment of domestic violence perpetrators are that there is clear evidence to suggest that partner aggression is not a unitary phenomenon, and that the frequency of use of controlling behaviors and the mutuality of physical aggression need to be assessed before embarking on a diagnosis and treatment plan. However, the assessment should be sensitive to reporting biases when only the victim or the perpetrator accounts are available. Further, the present study's findings suggest that the use of partner aggression may be a human problem rather than a male problem and so treatment plans should concentrate primarily on the nature of the physical aggression rather than the gender of the perpetrator and victim.

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Appendix

The revised Controlling Behaviors Scale (CBS-R)

1. Made it difficult to work or study
2. Control the others money
3. Keep own money matters secret
4. Refuse to share money / pay fair share
5. Threaten to harm the other one
6. Threaten to leave the relationship
7. Threaten to harm self
8. Threaten to disclose damaging or embarrassing information
9. Try to make the other do things they didn't want to
10. Use nasty looks and gestures to make the other one feel bad or silly
11. Smash the other ones property when annoyed/angry
12. Be nasty or rude to other one's friends or family
13. Vent anger on pets
14. Try to put the other down when getting 'too big for their boots'
15. Show the other one up in public
16. Tell the other they were going mad

17. Tell the other they were lying or confused

18. Call the other unpleasant names?

19. Try to restrict time one spent with family

or friends

20. Want to know where the other went and who

they spoke to when not together

21. Try to limit the amount of activities outside

the relationship the other engaged in

22. Act suspicious and jealous of the other one

23. Check up on others movements

24. Try to make the other feel jealous

Footnotes

1 Bi-directional refers to physical aggression used at anytime in the 12 month period, as opposed to in the same episode

Table 1

Comparison of Controlling Behaviors Reported by Respondents for Themselves and Their Partners (*N* = 1339)

	Mean Frequency (*SD*)		
Controlling Behaviors	Self Reports	Partner Reports	*t(df)*
Economic	0.74 (0.63)	0.87 (0.74)	*t*(1339) = 43.1**
Threats	0.30 (0.49)	0.30 (0.55)	*t(*1339) = 22.5**
Intimidation	0.41 (0.45)	0.48 (0.58)	*t(1339)* = 33.8**
Emotional	0.58 (0.61)	0.65 (0.73)	*t(1339)* = 34.5**
Isolation	0.69 (0.70)	0.78 (0.84)	*t(1339)* = 36.5**

Note. ** p < .001.

Table 2

Controlling Behaviors by Cluster Membership for Respondents' Self and Reports about their Partners for Both Men and Women

		Mean Frequency of Controlling Behavior									
		Economic		Threats		Intimid		Emotional		Isolation	
Control	Clusters	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR
Low	**2**	**0.56**	**0.68**	**0.16**	**0.14**	**0.26**	**0.29**	**0.34**	**0.40**	**0.42**	**0.48**
	3	0.68	0.77	0.23	0.19	0.36	0.37	0.52	0.52	0.63	0.64
High	**2**	**1.29**	**1.67**	**0.71**	**0.96**	**0.83**	**1.27**	**1.27**	**1.67**	**1.46**	**2.02**
	3	2.02	2.17	1.79	1.61	1.45	1.79	1.87	2.31	1.94	2.55

Note. Intimid = intimidation. Control = level of Controlling behavior use. Cluster = number of cluster solution specified. SR = self-report. PR = partner-report.

Table 3

Crosstabulation of Control by Aggression

Control	Cluster	NPA (*n* = 918)	PA (*n* = 307)	Row Total
Low	2	83% (*n* = 779)	17% (*n* = 157)	100% (*n* = 936)
	3	78% (*n* = 870)	22% (*n* = 244)	100% (*n* = 1114)
High	2	48% (*n* = 139)	52% (*n* = 150)	100% (*n* = 289)
	3	43% (*n* = 48)	57% (*n* = 63)	100% (*n* = 111)

Note. Control = level of Controlling behavior use. Cluster = number of cluster solution specified. NPA = not physically aggressive. PA = physically aggressive.

Table 4

Percentage Distribution (and Numbers) of Relationship Type by Cluster Solution and Sex

Custer	Men (*n*=110)	Women (*n*=265)	PA (*n*=375)	NGK & A (2003a)	Johnson (1999)
	Mutual Violent Control				
2	16% (18)	18% (48)	18%	3%	3%
3	2% (2)	5% (14)	4%		
	Intimate Terrorism				
2	7% (8)	23% (60)	18%	11%	18%
3	9% (10)	13% (34)	12%		
	Violent Resistance				
2	4% (4)	5% (14)	5%	6%	4%
3	5% (6)	5% (14)	5%		
	Common Couple Violence				
2	53% (58)	49% (130)	50%	59%	27%
3	74% (81)	74% (195)	74%		
	Nonviolent partners of Intimate terrorists				
2	20% (22)	5% (13)	9%	na	na
3	10% (11)	3% (8)	5%		

Note. Men = as a proportion of all men involved in physically aggressive relationships. Women = as a proportion of all women involved in physically aggressive relationships. PA = as a proportion of all physically aggressive relationships.

Table 5

Level of Escalation by Type of Relationship Category (Perpetrators and victims of Intimate terrorism and Common couple violence only)

Cluster	Relationship type	De-escalated	No change	Escalated	N
	Perpetrator reports				
2	IT	44% (7)	31% (5)	25% (4)	100% (14)
	CCV	46% (25)	41% (21)	7% (13)	100% (36)
3	IT	36% (5)	50% (7)	14% (2)	100% (14)
	CCV	53% (19)	36% (13)	11% (4)	100% (36)
	Victims reports				
3	IT	17% (4)	33% (8)	50% (12)	100% (24)
	CCV	37% (21)	42% (24)	21% (12)	100% (57)

Note. Smaller sample size as respondents were required to complete the item on escalation if they had used *any physical force.* Participants were asked if their aggression had reduced (de-escalated), stayed the same (no change) or increased (escalated) over the course of their relationship.

Table 6

Severity of Violence by Relationship Category measured by Injuries Inflicted.

(Perpetrators and Victims of Intimate terrorism and Common Couple Violence Only)

Cluster	RT	No Injury	Injury	N
	Perpetrator reports			
2	IT	87% (59)	13% (9)	100% (68)
	CCV	93% (170)	8% (14)	100% (187)
3	IT	80% (35)	21% (9)	100% (44)
	CCV	91% (249)	10% (26)	100% (275)
	Victim reports			
3	IT	64% (23)	42% (15)	100% (36)
	CCV	91% (251)	9% (25)	100% (276)

Note. Cluster = cluster solution specified. RT= relationship type. Perpetrator reports of IT are from self-reports. Victim reports of IT are from partner-reports from VR and VIT.

Table 7

Mutuality of Violence by Relationship Category (Intimate terrorism and Common Couple Violence Only)

Cluster	RT	Self Only	Partner Only	Both	Row Total
	Perpetrator reports				
2C	IT	65% (44)	na	35% (24)	100% (68)
	CCV	40% (75)	30% (56)	30% (57)	100% (188)
3C	IT	39% (17)	na	61% (27)	100% (44)
	CCV	37% (102)	26% (72)	37% (102)	100% (276)
	Victims reports				
3C	IT	na	49% (19)	51%% (20)	100% (39)
	CCV	37% (102))	26% (72)	37% (102)	100% (276)

Note. Cluster = cluster solution specified. RT = relationship type. Classified as perpetrator only if participant had used any physical aggression in the past year and their partner had not used any. Classified as both if participant and their partner had both used physical aggression in the last year.

Table 8

Difference in Frequency of Physical Aggression Between Self and Partner-reports

		Relative frequency of physical aggression						
Cluster	RT	-2.50 to -1.00	-0.99 to –0.50	-0.49 to –0.01	0	0.01 to 0.49	0.50 to 0.99	1.00 to 2.50
	Perpetrators' reports							
2	IT	2%	0%	4%	7%	63%	21%	3%
	CCV	2%	35%	32%	14%	43%	5%	1%
3	IT	0%	5%	11%	14%	41%	25%	5%
	CCV	3%	12%	27%	10%	41%	8%	1%
	Victims' reports							
3	IT	36%	13%	36%	5%	5%	5%	3%
	CCV	3%	12%	27%	10%	41	8%	1%

Note. Score calculated by subtracting each participant's score on the CTS from their partner's score on the CTS. A negative difference indicates more physical aggression perpetrated by the partner of the participant and a positive difference indicates more participant physical aggression than their partner.