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# Harm, Intent, and the Nature of Aggressive Behavior

## Measuring Naturally Occurring Aggression in Barroom Settings

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*The research goals were to use the constructs of harm and intent to quantify the severity of aggression in the real-world setting of the bar/club, to describe the range of aggressive behaviors and their relationship to harm and intent, and to examine gender differences in the form and severity of aggression. Systematic observations were conducted by trained observers on 1,334 nights in 118 bars/clubs. Observers documented a range of aggressive acts by 1,754 patrons in 1,052 incidents, with many forms of aggression occurring at more than one harm and intent level. Women used different forms of aggression, inflicted less harm, and were more likely to have defensive intent compared with men. Implications of the findings for research and measurement of aggression and applications to preventing aggression and violence are discussed.*

**Keywords:** naturalistic observation; barroom; alcohol and aggression; gender differences; intent; severity of aggression

Aggression is any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment.

—Baron and Richardson (1994, p. 7)

The key factors in this definition are the two constructs of harm and intent. Yet very little research has been done

to elucidate these constructs, and many measures of aggression do not address severity of harm or variability in intent. Moreover, knowledge of the nature of harm and intent in aggression as it occurs in the real world is very limited. In the present article, we focus on methodological issues in using the constructs of harm and intent to measure severity of naturally occurring aggression observed

in bars and clubs. Second, we explore the relationship between harm, intent, and overall severity with different forms of physical and nonphysical aggression. Finally, we explore gender differences in both the form and severity of aggression.

### The Need for Observational Research on Aggression in Naturalistic Settings

Despite recognition of the importance of studying aggression in its social context (Archer & Browne, 1989; Pernanen, 1991; Roizen, 1997), little research has been conducted on adult aggressive behavior as it occurs in real-world settings, with the exception of analyses of criminal case files (e.g., Felson, Ribner, & Siegel, 1984; Luckenbill, 1977; Wilbanks, 1984), which have provided valuable insight into various aspects of aggression but are limited to severe acts of aggression.

Although experimental laboratory research on aggression has a number of strengths, especially in terms of drawing causal inference (see Anderson & Bushman, 1997; Giancola & Chermack, 1998; Tedeschi & Quigley, 1996, 2000), this method is inadequate for addressing the complexity, diversity, and contextual aspects of real-world aggression. In particular, the experimental format uses unnatural forms of aggression, such as setting an electric shock for an opponent, and is typically limited to one type of provocation, one or two specific contexts, one strategy for retaliation, and does not address variations in intent. Surveys and interviews may be affected by respondents' memory and concerns about social desirability (Saunders, 1991), and surveys, in particular, typically involve standardized formats, restricted focus, and a lack of differentiation on intent.

In sum, although each approach to research on aggression has advantages and disadvantages, most of the common approaches to measuring aggression tend to be one-dimensional, measure a limited range of types and severity of aggressive acts, and do not address variations in intent. Because naturalistic observation is one of the few methods that can provide objective data about how aggression evolves (e.g., the behavior of each participant,

the role of third parties, the escalation process, the diversity of triggering events and aggressive tactics, and the relationship between social contexts and aggression), it is important to continue to make methodological advances that will further improve use of observational approaches to studying aggression.

### Issues in Assessing Harm and Intent Using Naturalistic Observation of Aggression

Naturalistic observation has a number of advantages, including high ecological validity, a lack of response bias (see Krahe, 2001), and the ability to collect data on a wide range of aggressive acts from the very minor to very severe. Unobtrusive observations, in particular, avoid many demand characteristics (reactivity, social desirability, fear of potential consequences). Although naturalistic observation has been used in specific research areas (e.g., Graham, West, & Wells, 2000; Homel, Carvolth, Hauritz, McIlwain, & Teague, 2004; Pepler & Craig, 1995; Shinar, 1998; Turner, Layton, & Simons, 1975), no research to date has developed a systematic method for applying the theoretical constructs of harm and intent to aggression observed among adults in real-world settings.

*Assessing intent.* As noted above, a key aspect of aggression is intent to harm. A problem for observational research is that intent is an internal event that must be inferred when observing aggression. It should be noted, however, that inference is necessary whether the aggression is observed by an objective researcher-observer or by the target of the behavior (see Malle & Knobe, 1997). For example, two boys are roughhousing, one pins the other on the ground against his will and the one who is pinned to the ground becomes upset. Was the boy who pinned the other one just playing or was there some aspect of bullying (i.e., intentional harm) in the behavior? Previous research distinguishing horseplay from aggression among children (Boulton, 1991) suggests that such distinctions regarding intent can be made.

*Assessing harm.* The second key defining feature of aggression is the harmful act. However, harm is not a

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single entity; it can vary both in form and severity. Building on Buss's (1961) dimensions of physical/verbal, active/passive, and direct/indirect, Baron and Richardson (1994) defined harm broadly ranging from obvious physical forms of aggression, such as stabbing or punching (physical-active-direct), to more subtle forms of aggression, such as refusing to speak to another person (verbal-passive-direct; see Baron & Richardson, Table 1, p. 10). Yet little research has been done to categorize and document the frequency of the various forms of aggression as they occur in real-world settings.

Within experimental research, severity can be easily defined as level or duration of shock set for an opponent. However, relatively little research has investigated differences in severity of aggression as it occurs naturally. For physical aggression, level of severity has been based usually on the form of the aggressive act. For example, the most widely used measure of marital aggression, the Conflict Tactics Scale (CTS; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), defines, a priori, certain forms of aggression (e.g., pushing, arm twisting) as minor and others (e.g., kicking) as severe without taking into consideration the level of force used or the extent of harm or injury resulting from the act, although the current version of the CTS does include a separate injury scale. Thus, using these distinctions, pushing someone downstairs or twisting someone's arm to the point of pain or injury would be classified as minor aggression, whereas a light kick to the leg would be defined as severe. These examples highlight the usefulness of separating the dimensions of form and severity when measuring aggression.

*Opportunities for observing adult aggression.* Real-life aggression, especially among adults, is quite rare and often occurs in private settings. Therefore, it is necessary to find suitable public settings for conducting such research. Bars and nightclubs offer a unique opportunity to observe naturalistic aggression because aggression is more frequent in these establishments than in most other social settings, especially for men (Graham, Wells, & Jelley, 2002; Leonard, Quigley, & Collins, 2002; Pernanen, 1991). Moreover, bars and nightclubs are public spaces where observing others is not only possible but normative (Cavan, 1966; Tomsen, 1997).

The primary goal of the present research was to develop a valid and reliable way to quantify severity of aggression (according to level of harm and intent) documented by trained researchers conducting observations in the real-world setting of the bar/club. A secondary goal was to describe the range of aggressive behaviors and how these behaviors are associated with level of harm to the victim, apparent intent of the aggressor, and overall severity of aggression. Because gender is a key factor for frequency, severity, and type of aggression (Chilton & Jarvis, 1999;

Graham & Wells, 2002; Harris, 1992), we also explore gender differences in behaviors displayed, harms inflicted, and extent that aggression was intentional.

It should be noted that the present research focuses on barroom settings and, therefore, the specific patterns of aggressive acts would not be expected to apply to other settings (e.g., home, workplace). At the same time, the primary goal of the research is to further develop methods for research on aggression in real-world contexts, and the concepts and methods developed in the present research are readily applicable to measuring aggression in other social contexts. Moreover, because bars and clubs are one of the most common places for physical aggression to occur among adults, knowledge about aggression in this setting is important in its own right.

## Hypotheses

Consistent with our argument that severity of harm and aggressive intent cannot be inferred solely on the basis of the form of the act, our first hypothesis is that many forms of aggression will display considerable variability in both intent to harm and level of harm. Naturally, this variability would apply to some forms of aggression more than others, and level of harm and intent would be expected to be positively related to one another.

In terms of gender differences, there is some evidence that men and women tend to use different forms of aggression (e.g., women are more likely to slap or hit with an object, whereas men are more likely to choke or strangle; see meta-analysis, Archer, 2002), at least in the context of partner violence. There also is evidence from the literature on partner violence that men tend to engage in more severe/injurious aggression than women (see meta-analysis, Archer, 2000). Finally, although there is some evidence that women initiate physical partner aggression as often or more often than men (Archer, 2000), findings based on the full range of naturally occurring aggression occurring indicate that men are more likely than women to engage in high-end, risky aggression (see meta-analysis, Archer, 2004), suggesting that men may be more likely than women not only to engage in more severe aggression but also to take the risk of initiating aggression, especially for aggression involving someone other than an intimate partner. Based on these considerations, we hypothesize that (a) men and women will tend to use different forms of aggression, (b) harm caused by acts of aggression by women will be less severe than harm caused by men, even when engaging in the same form of aggressive behavior, and (c) men will be more likely to engage in nondefensive aggression, whereas women will be more likely to become aggressive in self-defense.

## METHOD

The data used in the present analyses were collected as part of a randomized control trial to evaluate the effectiveness of the *Safer Bars* intervention to reduce aggression in bars (Graham et al., 2004). The study included 1,334 nights of observations conducted by 148 observers (in male-female pairs) in 118 large-capacity bars (capacity greater than 300) in Toronto, Canada, during the periods of November 2000 to June 2001 and December 2001 to June 2002. Observations were conducted on Friday and Saturday nights from about 11:30 p.m. until after 2:00 a.m. when the bars closed. Weekend late nights were selected for observations because these are known to be high-risk times for aggression (Gerson & Preston, 1979; Wells & Graham, 2003a). To be eligible for the study, the establishment had to be open during the planned visit hours and safe locations for visits by a male-female observer pair.<sup>1</sup> The sample included all large-capacity bars/clubs in the greater Toronto area with the exception of a handful of premises in which it would be impossible for male-female observer pairs to conduct observations unobtrusively, namely, strip clubs and male-only gay clubs (gay clubs that were not restrictive in terms of gender of patrons were included in the sample). Thus, the sample of establishments reflects the ethnic and cultural diversity of the city of Toronto (ranging from expensive nightclubs to "skid row" types of establishments and including college bars, gay bars, salsa bars, hip-hop clubs, etc.). Because bars and clubs that were included in the randomized control trial portion of the research were visited more often than other establishments included in the original sample, and because some establishments closed during the study, the frequency with which bars/clubs were visited varied from 1 time to 27 times, with more than 90% of premises visited at least 4 times and more than 50% visited at least 5 times.

All aggressive behaviors observed inside the bar, in the queue to enter the bar, or outside the bar after closing are included in the present analyses. This research strategy of recording all aggression within view of the observers provides an unbiased sample of barroom aggression, except that minor aggression may be underrepresented compared with more severe aggression, which is more likely to be more visible over a larger area.

### Procedures for Conducting Observations

Observers were required to have a bachelor's degree in the social sciences or equivalent research experience, be familiar with bar culture, and feel comfortable spending time in bars and clubs. Each applicant was given a test of his or her ability to observe and accurately record

aggressive incidents and was interviewed by at least two members of the project team. The test consisted of viewing a video clip of an aggressive incident in a bar and writing a description of the aggressive incident as it occurred in the clip (from memory). The description was scored on accuracy and ability to write by at least two members of the research team, with applicants considered for the position only if they met the minimum criterion score. All observers were provided with a manual (Graham, 2000, 2002)<sup>2</sup> and 25 hours of training delivered throughout 2 weekends (including two bar visits) covering the following topics: how to observe in bars; identifying aggression; data collection procedures; and ethical, confidentiality, and safety issues. Observers were assigned to different partners and bars/clubs each week, with the assignment to bars taking into consideration the location (i.e., whether the observer needed to drive to the bar) and type of bar (e.g., age, ethnicity of clientele) to be visited.

The observers were given detailed guidelines for conducting observations, including dress appropriately for the bar; act like any other bar patron; avoid any involvement, control, or manipulation of events taking place inside or outside of the bar, especially aggressive incidents; sit or stand with your partner so that you can observe while appearing to be talking to each other; and locate yourself in a place with the best view of the busiest area of the bar. In addition, a number of quality control procedures were implemented, including close supervision of observers by the field coordinators.

*Documenting aggression.* A substantial part of the training focused on recognizing and describing aggression. The training manual provided general categories and examples of aggression consistent with definitions used in previous observational studies of barroom aggression (Graham, LaRocque, Yetman, Ross, & Guistra, 1980; Graham, West, & Wells, 2000; Homel & Clark, 1994) and the general definition of aggression provided by Baron and Richardson (1994). Examples provided to observers included minor incidents, such as someone being intentionally obnoxious or argumentative, someone touching someone who does not want to be touched, and verbal conflict, as well as more severe aggression such as physical fights. Observers also were given pointers on how to spot potential problem situations (e.g., body language, security staff moving quickly through the bar, etc.) based on previous research (Graham et al., 1980; Graham & Wells, 2001a). Although data were recorded independently, observers were permitted to bring potential or actual aggression to the attention of their partner; however, they were not allowed to discuss the incident prior to completing the aggression forms. The observers were encouraged to record even mild or ambiguous incidents, including borderline and incipient behavior such

as provocative acts and horseplay. This was done first so that they would be attentive to early stages of incidents that turned into aggression and, second, so that consistent inclusion/exclusion criteria based on ratings of harm and intent could be applied by members of the research team as part of the data analysis (see the next section).

When the observers saw an incident, they watched and listened as closely as possible without making themselves conspicuous. If needed, after the incident, the observers made notes on a cigarette pack or little notepad to help remember the details. Immediately after leaving the bar or first thing the next morning, the observers independently completed detailed descriptions of the incidents and incident participants (sex, age, role in incident, level of aggressive behavior, level of intoxication, etc.) as well as a step-by-step narrative description of exactly what took place during the incident. These incidents were submitted to the field coordinator, who prepared a narrative incorporating details from the two independent descriptions prepared by the observers. At the weekly meeting, the observers reviewed the combined narrative and resolved any discrepancies or omissions. Incidents that were related (e.g., a continuation of an earlier fight, a man harassing several women in a row) were combined as single incidents. However, if the same person appeared in several incidents but the incidents were unrelated, these were treated as separate incidents. Overall, 51% of incidents were reported by both observers, the remainder by only one. In almost all cases, reporting of an incident by only one observer occurred because the other observer did not see the incident (e.g., observers were looking in different directions or the observers were not together at the time of the incident), although there were a few incidents that were seen by both observers but viewed as aggression by only one of the observers. When both observers reported an incident, there was high interrater agreement on descriptors of participants, such as estimated age, height, and weight of participants ( $r = .84, .73, \text{ and } .77$ , respectively).

### **Form of Aggressive Act Done by Participants in Incidents**

No existing standardized categories of naturally occurring aggression were found in the research literature, other than distinctions between nonphysical and physical aggression and moderate versus severe physical aggression. Therefore, new categories were developed for the present purposes based on content coding of each aggressive act. Nonphysical aggression included the following general categories of behavior: (a) expressing anger or disapproval, (b) abusing, swearing at, insulting, or demeaning someone, (c) mutual arguments, (d) explicit threats/challenges/wanting to fight, (e) angry look/body language,

(f) provocative or aggressive rule-breaking, (g) unwanted sexual overtures (no physical contact),<sup>3</sup> (h) glaring/intimidating or trapping/blocking someone without physical contact and no explicit threat or challenge, and (i) an assortment of other acts coded miscellaneous (e.g., turning off the television in a quiet tavern to the ire of other patrons who had been watching, theft).

The main categories of physical aggression were defined as (a) pushing/shoving, (b) pulling/grabbing, (c) intentional bumping, (d, e) two categories of unwanted sexual contact (invasive acts, such as rubbing genitals against someone or touching "private zones" of the body, and noninvasive, such as persistent unwanted touching of "nonprivate zones" of the body, e.g., arm, shoulder), (f) holding/restraining, (g) punching, (h) resisting aggressively, (i) slapping, and (j) miscellaneous, including jabbing/poking someone with a finger, splashing someone with the contents of a drink, throwing small objects such as beer coasters or ice cubes at people, hair pulling, giving a "purple nurple" (i.e., pinching and twisting someone's nipple), kicking, throwing someone against the wall, and hitting someone with an object such as a beer bottle.

### **Defining Levels of Harmful Acts and Aggressive Intent for Each Participant in the Incident**

*Defining level of harm to target.* Harmful acts were defined as any act by someone where it was evident that the act had unwanted negative consequences for one or more persons. These acts included mild consequences, such as making a person feel bad, as well as more serious consequences, such as causing physical pain or injury. Although specific types of behavior (e.g., pushing, arguing) were generally unambiguous, the level of harm to the target from the behavior required some interpretation. Therefore, criteria for defining levels of harmful acts were developed, and each incident documented by observers was examined by at least two trained coders (in total, there were five female and four male coders) who rated the level of harm by each participant in the incident based on the criteria described below.

Two levels of nonphysical harmful acts were defined: minor (i.e., causing minimal harm such as might be experienced from an angry look or an expression of annoyance) and moderate-severe (i.e., acts, such as yelling, screaming, or threatening that would cause greater psychological impact, possibly even fear). Two additional forms of nonphysical aggressiveness were identified that did not result in actual harm but involved expressions of anger or other behaviors generally considered to be aggressive by observers, namely, (a) acts where there was no target or the target was not present and (b) acts where

the target was present but unaware that he or she was the target of aggression. Expressions of anger that do not harm or threaten others also have been noted by Felson (2002, p. 13) as acts that are similar to aggression but do not meet the definition of aggression. Because no harm actually occurred and it was unclear whether harm was actually intended, individuals displaying these aggressive behaviors were excluded from the present analyses.<sup>4</sup>

Acts involving physical contact were coded into three main levels of harm: (a) minor physical aggression—acts where the harm was primarily psychological (such as making the person feel bad, unwanted, pestered, invaded), with physical harm being minimal (e.g., light pushing or pushing someone away, unwanted but non-forceful contact as part of a sexual overture, grabbing someone in a nonforceful way); (b) moderate physical aggression—acts where there was a definite unwanted physical impact but harm did not reach the extent of causing pain (e.g., fairly forceful pushing, shoving, grabbing); and (c) severe physical—acts that caused physical pain (e.g., punching, kicking).

If a person did more than one act of physical aggression, the harm level was assigned for the most aggressive act; similarly, within nonphysical aggression, the harm level was defined by the most aggressive nonphysical act. Codes also were developed to cover situations where a person engaged in both physical and moderate-severe nonphysical aggression. In particular, moderate-severe nonphysical aggression was considered to be a factor that amplified physical aggression (e.g., pushing with threats was considered a higher level of physical aggression than pushing without threats). Therefore, two additional harm levels were created that reflected acts that included a combination of minor or moderate physical harm with moderate-severe nonphysical harm: minor physical with moderate-severe nonphysical aggression and moderate physical with moderate-severe nonphysical, and persons engaging in these acts were scored on form of aggression for both physical and nonphysical aggression. We did not create an additional category to reflect severe physical aggression with moderate-severe nonphysical aggression because, in many cases, nonphysical aggression could not be reliably documented by observers for acts involving this level of aggression (e.g., for a brawl involving five to six men throwing punches and spectators shouting, it was often difficult to ascertain which of those individuals who were throwing punches were also yelling or making threats) and the level of aggression was already severe without taking into consideration nonphysical aggression. Similarly, minor nonphysical harm that occurred with physical aggression was not scored as a separate category because almost all physical aggression involved at least some form of minor nonphysical aggression (even if only an angry look).

*Defining level of intent for each participant.* As stated earlier, one problem for observational research is that intent is an internal event that must be inferred from the behavior and expressions of the aggressor and victim. However, there is evidence that this can be done fairly accurately. For example, in his study of playful and aggressive fighting among children, Boulton (1991) found that horseplay could be distinguished from aggression based on (a) the behavior and its impact, (b) apparent distress/annoyance of target, and (c) whether the perpetrator showed surprise or regret if the behavior appeared to cause distress. However, in coding the present data, it became apparent that a dichotomy of intent/no intent was not adequate when evaluating specific acts in the bar-room setting. In particular, consistent with both judgments in criminal courts and the thinking of people generally (see Tedeschi & Felson, 1994), causing harm in self-defense or defense of others needed to be distinguished from acts that were not defensive. We also found it necessary to define a category of “ambiguous intent.” There are a number of ways that intent in the real world may be ambiguous to both third-party observers as well as direct targets of potential aggression. For example, a man grabs the arm of a woman and pulls her toward the dance floor. She shakes her head and indicates that she does not want to go. The man persists in pulling the woman toward the dance floor despite her protests and her evident discomfort until she becomes angry. Did the man intentionally harass the woman or did he believe that she wanted convincing? As noted by Malle and Knobe (1997), one defining component of intent is that the actor be aware that his or her action will result in harm. To judge whether the actor had knowledge of and intended the harm, coders examined the nature of the act (e.g., How rough was it? How persistent?), the actor’s state and demeanor (e.g., Was he/she too intoxicated to be able to recognize the impact of the act?), and the reaction of the target (e.g., Was the target’s discomfort so clearly evident that the actor should have been able to recognize that the action was unwanted?).

As with harm levels, no existing standardized methods of categorizing or rating intent were found in the research literature. Therefore, in addition to the category of no intent given to participants in incidents who were nonaggressive or whose harm in the incident was accidental (e.g., accidentally bumping someone) or wanted by the target (e.g., pushing or shoving that was part of mutual horseplay that was clearly enjoyed by the target), three levels of intent (defensive intent, probable intent, definite intent) were defined to capture the apparent intent of the person engaging in harmful acts, with specific criteria developed to distinguish these levels of intent (see Table 1).

**TABLE 1**  
**Criteria for Scoring Levels of Intent**

<i>Level of Intent</i>	<i>Label</i>	<i>Examples</i>
1	Defensive intent	Self-defensive acts, such as pushing someone away who is being aggressive where pushing uses no more force than required to escape from aggressor, giving a dirty look warning someone not to continue, and intervening with others to prevent greater harm, such as pushing people apart who are fighting where pushing uses no more force than required to stop fight, verbally trying to resolve dispute, and heated verbal aggression that is necessary due to urgency of situation
2	Probable	Persistent unwanted sexual overtures not scored full intent because aggressor's intoxication level may have made him or her unaware that overtures were not wanted; aggressive horseplay that appears to observers to be unwanted but where intent is in doubt because of joking manner of aggressor; aggressive response that was considered to be more forceful than necessary for self-defense but could have been intended as self-defense; horseplay or dancing that results in unwanted bumping or shoving of bystanders when bystanders were very clear with facial expression and body language that these acts were unwanted but intent to harm specific persons was unclear; walking through bar intentionally and carelessly bumping into people
3	Definite intent	Physical or nonphysical aggression where aggressor is clearly angry and actions are likely to affect the target adversely, emotionally or physically; persistence in unwanted sexual overtures or horseplay when target clearly and repeatedly indicates that the behavior is not welcome; response to aggression that clearly exceeds self-defense

The main criterion for distinguishing probable from definite intent was whether the person knew his or her behavior would cause unwanted harm to the target. In some cases, it was judged likely that the harm was intended but there was some uncertainty because of the actor's intoxication or the lack of a clear message from the target that the act was unwanted. These cases were rated probable intent. For ratings of defensive intent, the actor appeared to be aware of the harm but the act was clearly defensive, that is, the person acted harmfully solely to prevent harm to themselves or others. To receive a rating of defensive intent, the act had to be judged as no more aggressive than necessary (i.e., causing no more harm than necessary) to prevent harm to self or others. An act was rated definite intent if it was clear that the person intended the harm and engaged in a harmful act that went beyond self-defense or defense of others. Given the strict criterion for defensive intent and the generally agreed upon acceptability of defensive intent as legitimizing use of minimal force, self-defense was rated as the lowest possible intent in terms of aggression severity, followed by probable and then definite intent.

*Interrater agreement for ratings of harm and intent.*

Interrater agreement was assessed using Spearman rank order coefficient and the Kappa statistic. For harm level, the Spearman correlation between the two raters was .84 and the Kappa was .71.<sup>5</sup> For levels of intent (0 = no intent, 1 = defensive intent, 2 = probable intent, 3 = definite intent), agreement was slightly lower (Spearman correlation = .74, Kappa = .58). These measures indicate moderate to good agreement, although the lower number for the Kappa of agreement for intent suggests greater ambiguity in judging intent than for judging harm level. All codes were later

reexamined by two members of the research team to ensure consistency of codes and to resolve disagreements.

*Composite score on severity of aggression.* From a conceptual perspective, it makes sense to equate severity of aggression with level of harm inflicted; however, it is also reasonable to adjust the harm rating according to intent of the aggressor. That is, for the same act, intentional harm is perceived by the law and probably by victims as more severe, at least in terms of blameworthiness, than harm done in self-defense or where intent to harm is uncertain. For example, a victim would likely perceive an insult as more severe aggression if it was delivered with the intention of hurting the victim compared with an insult that may have been intended as a joke (i.e., ambiguous intent). Therefore, scores on the main harm categories for physical and nonphysical aggression were weighted using the intent rating for composite scores of overall severity of physical and nonphysical aggression. Thus, severity of physical aggression was coded as follows: (a) minor physical, defensive intent; (b) minor physical with moderate-severe nonphysical, defensive intent; (c) minor physical, probable intent; (d) minor physical with moderate-severe nonphysical, probable intent; (e) minor physical, definite intent; (f) minor physical with moderate-severe nonphysical, definite intent; (g) moderate physical, defensive intent; (h) moderate physical with moderate-severe nonphysical, defensive intent; (i) moderate physical, probable intent; (j) moderate physical with moderate-severe nonphysical, probable intent; (k) moderate physical, definite intent; (l) moderate physical with moderate-severe nonphysical, definite intent; (m) severe physical, defensive intent; (n) severe physical, probable intent; and (o) severe physical, definite intent. Certain values (i.e., minor physical with moderate-severe

nonphysical, defensive intent; severe physical, defensive intent) were hypothetically possible but no incidents of these harm-intent combinations occurred. Examples of incidents showing different combinations of harm-intent combinations can be found at [http://publish.uwo.ca/~kgraham/safer\\_bars.html](http://publish.uwo.ca/~kgraham/safer_bars.html).

A similar approach was used to scale nonphysical aggression as follows: (a) minor nonphysical, defensive intent; (b) minor nonphysical, probable intent; (c) minor nonphysical, definite intent; (d) moderate-severe nonphysical, defensive intent; (e) moderate-severe nonphysical with minor physical, defensive intent; (f) moderate-severe nonphysical, probable intent; (g) moderate-severe nonphysical with minor physical, probable intent; (h) moderate-severe nonphysical, definite intent; (i) moderate-severe nonphysical with minor physical, definite intent; (j) moderate-severe nonphysical with moderate physical, defensive intent; (k) moderate-severe nonphysical with moderate physical, probable intent; and (l) moderate-severe nonphysical with moderate physical, definite intent. Again, certain values were hypothetically possible but did not occur (i.e., moderate-severe nonphysical, defensive intent). Note that there is overlap of the physical and nonphysical scales with categories e, g, and i to l on the nonphysical score (reflecting combinations of moderate-severe nonphysical aggression with minor and moderate physical aggression) duplicating categories b, d, f, h, j, and l on the physical aggression scale.

Analyses include descriptive statistics, cross-tabulations, and chi-square tests for assessing the relationships between categorical variables and hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992) for assessing differences in mean scores controlling for nesting of data (i.e., aggressive acts are nested within incidents and incidents are nested within observation periods). Cohen's *d* is used to describe effect size for significant differences between means.

## RESULTS

Overall, 1,052 incidents of aggression involving patrons were documented, including 1,798 male patrons (66.6% of all participants) and 902 female patrons.<sup>6</sup> The average number of patrons per incident was 2.6 (including both aggressive and nonaggressive participants), with the total number varying from incidents involving one patron (17.6%) to incidents with eight or more persons (1.5%). Most incidents included two (41.6%) or three patrons (23.0%). Of the 2,700 patrons involved in incidents, 799 persons who were rated as nonaggressive (e.g., nonaggressive victims, peaceful and nonaggressive third parties) and 147 who exhibited aggressive-like acts

that did not affect a victim were excluded from further analyses. Therefore, the current analyses include the remaining 1,754 patrons, who exhibited at least one act of harmful behavior with defensive, probable, or definite intent. Because those exhibiting moderate-severe nonphysical aggression with minor and moderate physical aggression were rated both for physical and nonphysical aggression, these 142 individuals were included in analyses of both physical and nonphysical aggression (i.e., 68 who engaged in minor physical aggression and moderate-severe nonphysical aggression and 74 who engaged in moderate physical aggression and moderate-severe nonphysical aggression).

### Physical Aggression

Table 2 lists the main categories of physical aggression according to the frequency of occurrence. Of the main categories, pushing/shoving was most frequent, whereas slapping was least frequent. As shown in Table 2, most forms of aggression occurred at two and sometimes three levels of harm, although some acts were predominantly at one harm level (i.e., unwanted sexual contact was almost always rated minor, whereas punching was mostly rated severe). Most acts also showed considerable variability on intent, with only a few being predominately one level of intent (i.e., bumping and non-invasive unwanted sexual contact were almost always rated probable intent, whereas punching was mostly rated definite intent). There was a significant relationship between form of physical aggression and both level of apparent harm to the target of the aggression ( $\chi^2 = 732.5$ ,  $df = 18$ ,  $p < .001$ ) and level of intent ( $\chi^2 = 461.1$ ,  $df = 18$ ,  $p < .001$ ). There was also a significant association between level of harm and intent ( $\chi^2 = 208.4$ ,  $df = 4$ ,  $p < .001$ ) that was linear (Spearman  $r = .41$ ,  $p < .001$ ), with severe physical aggression almost always rated as definite intent, moderate rated as definite intent for 61% of acts and minor rated as definite intent for only 27% of the aggressive acts. Overall, the results suggest that although there was a significant relationship between form of aggression and harm and intent, there was also considerable variation in level of harm and intent within some forms of aggression, as hypothesized.

In terms of the overall measure of severity of physical aggression (i.e., combined harm and intent score), as shown in Table 2, punching was rated the most severe, followed by slapping, miscellaneous, pulling/grabbing, pushing/shoving, sexually invasive overtures, resisting aggressively, bumping, sexually noninvasive overtures, and holding/restraining. HLM (Bryk & Raudenbush, 1992) was used to examine the significance level of the differences in severity of aggression for the different acts

**TABLE 2**  
**Forms of Physical Aggression by Gender and Level of Harm and Intent**

Form of Aggression	Level of Harm			Level of Intent			Average Score (SD) on Severity of Physical Aggression			
	% Women	% Minor	% Moderate	% Severe	% Defensive	% Probable	% Definite	Overall	Men	Women
Any physical aggression ( <i>n</i> = 938)	25.7	68.1	20.9	11.0	21.5	37.1	41.4	5.9 (4.5)	6.4 (4.5)	4.6 (4.3)
Pushing/shoving ( <i>n</i> = 193)	40.4	61.7	37.8	0.5	38.9	16.1	45.1	5.7 (4.4)	7.0 (4.3)	3.9 (3.7)
Pulling/grabbing ( <i>n</i> = 140)	16.4	63.6	32.1	4.3	22.1	34.3	43.6	6.0 (4.2)	6.4 (4.2)	3.9 (4.0)
Intentional bumping ( <i>n</i> = 100)	25.0	97.0	3.0	0.0	0.0	94.0	6.0	3.3 (1.2)	3.4 (1.2)	3.2 (1.2)
Unwanted sexual contact–invasive ( <i>n</i> = 89)	11.2	98.9	1.1	0.0	0.0	48.3	51.7	4.1 (1.3)	—	— <sup>a</sup>
Unwanted sexual contact–noninvasive ( <i>n</i> = 61)	3.3	100.0	0.0	0.0	0.0	85.2	14.8	3.3 (0.8)	—	— <sup>a</sup>
Holding/restraining ( <i>n</i> = 78)	14.1	87.2	12.8	0.0	46.2	32.1	21.8	3.3 (2.7)	—	— <sup>a</sup>
Punching ( <i>n</i> = 75)	8.0	5.3	5.3	89.3	0.0	9.3	90.7	14.1 (2.7)	—	— <sup>a</sup>
Resisting aggressively ( <i>n</i> = 69)	60.0	87.1	12.9	0.0	58.0	7.1	34.3	3.6 (3.7)	6.5 (3.7)	1.6 (2.0)
Slapping ( <i>n</i> = 32)	50.0	18.8	62.5	18.8	3.1	21.9	75.0	10.3 (3.8)	9.8 (3.8)	10.9 (3.9)
Miscellaneous ( <i>n</i> = 100)	28.0	46.0	31.0	23.0	18.0	36.0	46.0	7.9 (4.5)	7.7 (4.7)	8.3 (4.3)
Minor physical aggression ( <i>n</i> = 639)	29.0	—	—	—	26.3	46.9	26.8	3.1 (1.6)	3.4 (1.5)	2.5 (1.8)
Moderate physical aggression ( <i>n</i> = 196)	21.9	—	—	—	17.3	21.4	61.2	10.3 (1.8)	10.1 (1.8)	10.7 (1.6)
Severe physical aggression ( <i>n</i> = 103)	12.6	—	—	—	0.0	5.8	94.2	14.9 (0.2)	14.9 (0.3)	15.0 (0.0)
Men ( <i>n</i> = 697)	—	65.1	22.0	12.9	14.3	41.5	44.2	6.4	—	—
Women ( <i>n</i> = 241)	—	76.8	17.8	5.4	42.3	24.5	33.2	4.6	—	—

a. Number of women too low for comparison.

of aggression. HLM uses a regression approach that requires one of the categories to be designated the comparison category. We chose pushing/shoving as the reference category because the mean severity level on pushing/shoving was closest to the overall grand mean. The HLM analysis using the output with robust standard errors indicated that bumping ( $p < .001$ ), sexually noninvasive act ( $p < .001$ ), holding/restraining ( $p = .001$ ), punching ( $p < .001$ ), resisting aggressively ( $p = .002$ ), slapping ( $p < .001$ ), and miscellaneous ( $p = .004$ ) were all significantly different from pushing/shoving, whereas the comparison with pulling/grabbing and sexually invasive acts did not reach statistical significance.

*Gender differences.* About 26% of physically aggressive acts were committed by women. This reflects an overall underrepresentation of women among aggressors in that women accounted for 39.3% of barroom patrons during the observations. As shown in Table 2, there was a significant relationship between gender and form of aggression ( $\chi^2 = 125.1$ ,  $df = 9$ ,  $p < .001$ ). To determine which forms of aggression were significantly different by gender, we conducted a series of chi-square tests of each form compared with all others by gender. To control for chance findings, we set the significance criterion for these analyses at  $p < .001$  (see Gardner, 2001). Based on these analyses, women were overrepresented for resisting aggressively and slapping ( $p = .001$ ) compared with the overall proportion of women engaging in physical aggression and underrepresented for pushing, invasive ( $p = .001$ ) and noninvasive sexual overtures and punching.

There was a significant relationship between gender and level of harm ( $\chi^2 = 14.2$ ,  $df = 2$ ,  $p = .001$ ) and intent ( $\chi^2 = 84.2$ ,  $df = 2$ ,  $p < .001$ ). To assess the extent that a particular level of harm or intent was associated with gender, each level was compared to each of the other two, with the significance criterion set at  $p < .01$ . Analyses of the three different harm levels indicated that the only significant gender difference for pairwise  $2 \times 2$  comparisons was between minor and severe harm (women more likely to inflict minor harm and men more likely to inflict severe). For pairwise comparisons of the three intent levels, men and women were significantly different when comparing defensive intent with probable and definite (women more likely to have defensive intent, men more likely to have probable and definite); gender differences between probable and definite intent were not significant.

As shown in Table 2, not only did women engage in different forms of aggression from men but they also engaged in less severe aggression (based on the combined harm-intent score), with men receiving an overall score of 6.4 on the severity of aggression scale versus 4.6 for women ( $p < .001$ , based on HLM analysis, Cohen's

$d = .39$ ). Analyses within type of aggression also were conducted. These analyses indicated that even within type of aggression, men engaged in more severe aggression, significant ( $p < .001$  using HLM) for pushing/shoving (Cohen's  $d = .77$ ) and resisting aggressively (Cohen's  $d = 1.76$ ), and in the same direction but nonsignificant for pulling/grabbing. Although women scored higher than men on the aggression severity measure for slapping and miscellaneous, this difference was not significant. Note that for a number of types of acts (sexually invasive, sexually noninvasive, holding/restraining, punching), there were too few women who engaged in these behaviors for meaningful comparisons on the severity score.

### Nonphysical Aggression

Table 3 lists the main categories of nonphysical aggression in order of frequency of occurrence. As is evident from this table, the most common forms of nonphysical aggression were expressing anger or disapproval; abusing, swearing at, insulting or demeaning someone; mutual argument; and threat/challenges. As shown in Table 3, some acts were split fairly evenly on level of harm, whereas others were always or almost always rated at only one level. There was a significant relationship between type of act and level of harm ( $\chi^2 = 422.1$ ,  $df = 8$ ,  $p < .001$ ). There also was variation on intent within acts of nonphysical aggression, although most acts tended to be predominantly associated with a specific level of intent (e.g., angry look/body language tended to be defensive intent, threats/challenges/wanting to fight tended to be definite intent, and unwanted sexual overtures probable intent). Intent also was significantly related to form of nonphysical aggression ( $\chi^2 = 569.3$ ,  $df = 16$ ,  $p < .001$ ). Intent and harm levels also were significantly related overall ( $\chi^2 = 370.4$ ,  $df = 2$ ,  $p < .001$ ; Spearman  $r = .61$ ,  $p < .001$ ), with definite intent strongly associated with acts rated moderate-severe.

For the HLM analysis of differences in severity of aggression among different forms of nonphysical aggression, mutual argument was chosen as the reference category because the mean score on mutual argument was closest to the overall mean. These analyses indicated that all forms of nonphysical aggression were significantly different from mutual argument, with expressing anger or disapproval and miscellaneous at  $p = .001$  level and all others at  $p < .001$ .

*Gender differences.* A larger proportion of women engaged in nonphysical aggression than physical aggression (32.6% vs. 25.7%), but this proportion was still smaller than the average proportion of patrons who were women (39.3%). There was a significant overall relationship

**TABLE 3**  
**Forms of Nonphysical Aggression by Gender and Level of Harm and Intent**

Form of Aggression	Level of Harm				Level of Intent			Average Score (SD) on Severity of Nonphysical Aggression		
	% Women	% Minor Harm	% Moderate-Severe Harm	% Defensive Intent	% Probable Intent	% Definite Intent	Overall	Men	Women	
Any nonphysical aggression ( <i>n</i> = 958)	32.6	56.7	43.3	12.6	31.8	55.5	4.9 (3.5)	5.3 (3.4)	4.3 (3.5)	
Expressing anger or disapproval ( <i>n</i> = 226)	43.4	39.8	60.2	18.6	18.1	63.3	6.1 (3.7)	6.8 (3.5)	5.1 (3.8)	
Abusing, swearing at, insulting, or demeaning someone ( <i>n</i> = 162)	26.5	36.4	63.6	0.0	29.0	71.0	6.2 (3.2)	5.8 (3.2)	7.6 (2.6)	
Mutual argument ( <i>n</i> = 157)	36.3	70.7	29.3	2.5	38.2	59.2	4.4 (3.3)	4.6 (3.3)	3.9 (3.1)	
Direct threats/challenges/wanting to fight ( <i>n</i> = 122)	9.0	0.0	100.0	0.8	3.3	95.9	8.6 (1.4)	—	— <sup>a</sup>	
Angry look or body language ( <i>n</i> = 81)	71.6	100.0	0.0	70.4	16.0	13.6	1.4 (0.7)	1.8 (0.9)	1.3 (0.6)	
Provocative or aggressive rule-breaking ( <i>n</i> = 64)	34.4	100.0	0.0	0.0	75.0	25.0	2.3 (0.4)	2.3 (0.4)	2.2 (0.4)	
Unwanted sexual overtures (no physical contact) ( <i>n</i> = 40)	10.0	100.0	0.0	0.0	95.0	5.0	2.1 (0.2)	—	— <sup>a</sup>	
Glaring/intimidating or trapping/blocking ( <i>n</i> = 39)	10.3	92.3	7.7	35.9	33.3	30.8	2.3 (1.8)	—	— <sup>a</sup>	
Miscellaneous ( <i>n</i> = 67)	22.4	92.5	7.5	4.5	61.2	34.3	2.7 (1.9)	—	— <sup>a</sup>	
Minor nonphysical aggression ( <i>n</i> = 543)	37.2	—	—	21.0	50.5	28.5	2.1 (0.7)	2.2 (0.6)	1.8 (0.8)	
Moderate-severe nonphysical aggression ( <i>n</i> = 415)	26.5	—	—	1.7	7.5	90.8	8.7 (1.6)	8.7 (1.6)	8.8 (1.6)	
Men ( <i>n</i> = 646)	—	52.8	47.2	6.2	33.4	60.4	5.3	—	—	
Women ( <i>n</i> = 312)	—	64.7	35.3	26.0	28.5	45.5	4.3	—	—	

a. Number of women too low for comparison.

between form of aggression and gender ( $\chi^2 = 124.1$ ,  $df = 8$ ,  $p < .001$ ). Chi-square tests comparing each form with all others (with significance criterion set at  $p < .001$ ) indicated that women were overrepresented on expressing anger or disapproval and angry look/body language and underrepresented on threats/challenges.

As with physical aggression, women tended to engage in less harmful acts than did men ( $\chi^2 = 12.3$ ,  $df = 1$ ,  $p = .001$ ). There was also a significant overall relationship between gender and level of intent ( $\chi^2 = 75.1$ ,  $df = 2$ ,  $p < .001$ ), with pairwise comparisons (significance criterion set at  $p < .01$ ) indicating that women were more likely than men to have defensive intent compared with probable and definite and no significant gender difference in the comparison of probable and definite.

The HLM analyses indicated that men scored significantly higher on overall severity of aggression ( $p < .002$ , Cohen's  $d = .29$ ) and severity of expressing anger or disapproval ( $p = .008$ , Cohen's  $d = .47$ ), whereas women scored significantly higher than men on abusing/swearing at/insulting or demeaning someone ( $p = .001$ , Cohen's  $d = .60$ ). Gender differences on mutual argument and provocative or aggressive rule-breaking were nonsignificant. In terms of other forms of nonphysical aggression, there were too few women for comparisons on direct threats/challenges/wanting to fight, unwanted sexual overtures, glaring/intimidating or trapping/blocking, and miscellaneous for meaningful comparison, and analysis of angry look/body language could not be completed because of too little variability on the severity measure. These results suggest that the overall greater severity of aggression by men versus women is primarily due to women engaging in different forms of nonphysical aggression (e.g., angry looks, which tend to be rated low on severity, versus threats and challenges, which tend to be rated high) rather than major differences within forms of aggression.

## DISCUSSION

The results illustrate the heterogeneity of barroom aggression both in severity and form. Although acts such as pushing/shoving are commonly seen as aggression and included in various survey measures of aggression, many incidents of aggression in the present study involved less commonly recognized forms of aggression, such as unwanted sexual overtures (e.g., pestering, harassing, unwanted rubbing and touching), provocative or aggressive rule-breaking, intentional bumping, holding/restraining someone against his or her will, resisting aggressively, and a substantial miscellaneous category. This suggests

that measures of aggression based on the constructs of harm and intent may be more likely than measures based on specific forms of aggression to include the diverse array of aggressive acts that occur in real-world settings. Capturing all of the different forms of aggression is important not only to develop a greater understanding of how and why aggression occurs but also because forms of aggression may vary cross-culturally or between genders. Therefore, using a format for measuring aggression that includes only specific forms of aggression may produce misleading results in terms of estimating prevalence of overall aggression.

In addition to demonstrating the diversity of aggressive acts, the results also illustrated the lack of perfect correspondence between form of aggression and severity. This finding has important implications for measuring aggression. For example, pulling/grabbing was rated minor (i.e., primarily causing psychological harm due to the lack of physical force), moderate (i.e., physical impact on the target but no pain), and severe (i.e., causing pain). This lack of correspondence between form and severity for some acts suggests that the severity for these forms of aggression cannot be assumed, a priori, and also may provide insight into differences in rates of aggressive victimization. For example, Hegarty and Roberts (1998) noted a variation of reported partner abuse from 2.1% to 28.0% depending on the definition of partner abuse.

This research has made some progress toward developing a reliable and valid measure of severity of real-world aggression using ratings of harm and intent to quantify observational data, although more research, particularly directed toward validation, is needed. Interrater reliability was generally good and there was some evidence of content validity in that using criteria of harm and intent identified a wide range of ecologically meaningful aggressive behaviors occurring in bars/clubs. In addition, some support for validity was evident in the higher ratings of severity for some aggressive acts (e.g., punching) and lower for others (e.g., holding/restraining) that would correspond to usual interpretations of these forms of aggression. Nevertheless, it would be useful in future research to validate ratings made by third-party observers using ratings from the victim's and the perpetrator's perspectives as well as by using a large sample of raters assessing the same observed behaviors.

## Gender Differences

Gender differences emerged as an important aspect of barroom aggression. Men were overrepresented as aggressors, and this gender effect was greater for physical than for nonphysical aggression. This is consistent with many research studies suggesting that men are more

physically aggressive than women and are more likely to engage in violent crime (Archer, 1994; Chilton & Jarvis, 1999; Daley & Wilson, 1998; Eagly & Steffen, 1986) as well as being more likely to engage in barroom aggression (Graham & Wells, 2001a, 2001b; Homel, Tomsen, & Thommeny, 1992; Langley, Chalmers, & Fanslow, 1996). It is only in the context of partner aggression that women match or even exceed male aggression in some countries (Archer, 2000).

In terms of gender differences in the form of aggression and intent, consistent with findings from a meta-analysis by Bettencourt and Miller (1996), provocation appeared to play a more important role for women than men. In particular, men tended to engage in aggressive acts that reflected initiating aggression (aggressive sexual overtures, glaring/intimidating/trapping/blocking), whereas women engaged in acts that were more likely to be used in reaction to provocation, such as resisting aggressively and using angry looks or body language. The importance of provocation also was reflected in the much higher proportion of women than men rated as having defensive intent both for physical and nonphysical aggression. The high rate of male aggression in the form of aggressive sexual overtures also is consistent with evidence that women are often victims of sexual aggression, especially in barroom settings (Parks & Miller, 1997).

The greater likelihood of women responding defensively and the more severe aggression perpetrated by men than women even within the same form of aggression has important implications for interpreting gender comparisons on measures such as the CTS (Straus et al., 1996). As noted by critics of the CTS (e.g., Dobash, Dobash, Wilson, & Day, 1992), the fact that men and women have similar rates of engaging in physical aggression toward a partner does not mean that men and women are equally aggressive. Although the present findings relate to barroom aggression and would not necessarily apply to aggression in the home, where most partner aggression would be expected to occur, for acts such as pushing/shoving and pulling/grabbing there was considerable difference in the severity of aggression score for men versus women. These findings suggest that it may be inappropriate to make gender comparisons based solely on the form of aggression used without taking into consideration the level of force used and harm inflicted.

The analyses of gender differences in aggression in the present study also provide some confirmation that women are more likely to use indirect or passive forms of aggression (e.g., angry looks/body language), whereas men use more direct forms (e.g., threats, challenges; Bjorkqvist, 1994). Only one type of act showed higher severity of aggression by women than men—abusing, swearing at, insulting, or demeaning someone. One

possible explanation for this finding is that women report being more upset than men by aggressive interactions (Wells & Graham, 2003b) and, therefore, they may be more emotionally expressive (and be rated higher on harm) when being verbally aggressive toward someone.

### **The Need for More Attention to the Construct of Intent**

Aggressive acts occurring in the real world of bars and nightclubs demonstrate a number of points relevant to conceptualizing and measuring aggression. For example, resisting aggressively, holding/restraining, pushing/shoving, and pulling/grabbing were more likely than other physical acts to be rated as defensive intent, with resisting aggressively and pushing/shoving often used in self-defense and holding/restraining, pushing/shoving, and pulling/grabbing often used in defense of others. These findings illustrate the importance of intent in terms of the meaning of different behaviors. In particular, grabbing someone by the arm to prevent him or her from fighting is qualitatively different from grabbing someone by the neck in anger and intimidation. It is the context, intent, and level of force that give the act meaning. Using current definitions of aggression (e.g., Baron & Richardson, 1994), harm done with defensive intent would be considered no different from harm done to a nonaggressive victim; however, defensive intent has important legal and social significance (Brown & Tedeschi, 1976) and needs to be measured as a qualitatively different construct compared with aggressive acts not done for defensive reasons.

Although identifying defensive intent was an important aspect of measuring aggression in barroom settings, an equally important aspect in terms of understanding real-world aggression was the identification of probable intent. It is evident from this research and other studies of real-world aggression (e.g., Luckenbill, 1977) that aggression is often ambiguous, not only in terms of whether unwanted harm occurred but especially regarding intent. A very good example of this from the legal arena is the crime of stalking, where acts such as sending gifts that are usually considered benevolent could be construed as criminal aggression depending on the circumstances (see Dennison & Thomson, 2002). Judgment of intent by researchers in this study parallels the process engaged in by targets of potentially aggressive acts. The finding of ambiguity in intent highlights the need for further research to identify the contextual or mitigating factors that are taken into consideration before a person responds to provocation or perceives another person's behavior as aggressive, as well as the role of individual differences in the likelihood of attributing hostile intent to others (e.g., Crick & Dodge, 1994; Dill, Anderson, & Deuser, 1997;

Dodge, 1980; Matthews & Norris, 2002; Tremblay & Belchevski, 2004). More attention also needs to be paid to differences in the perspectives of the actor and target in terms of assessing intent and, by definition, the aggressiveness of an act. The importance of this difference in perspective has been recognized in research on sexual harassment (see Rotundo, Nguyen, & Sackett, 2001), teasing (Kowalski, 2000), and coercion (see Tedeschi & Felson, 1994) and may be especially relevant in barroom contexts, where there are as well as reduced awareness due to intoxication (Graham et al., 1980, 2000; Homel et al., 1992; Snow, Robinson, & McCall, 1991).

It should be noted that although aggressive acts often are ambiguous from the perspective of the target of the act, it is also possible that some of ambiguity of intent in the current study is a function of the research method (i.e., unobtrusive observation). Although some targets would have found the actor's intention ambiguous, other targets may have had more knowledge of the person and/or the situation than did the observers on which to base their judgment of intent. It was clear from the reaction of many targets in the present study, however, that they also found potentially aggressive acts ambiguous (e.g., Did that person bump me intentionally? Why does this person who is making sexual overtures not understand that I am not interested?). In some instances, the observers were actually at an advantage over the target in making a judgment about intent because they had been able to observe previous behavior of the actor that could provide insight into his or her intent.

Although the ambiguity of intent from the perspective of the target and third-party observers is clearly an important phenomenon in real-world aggression, it is unclear whether ambiguity or a gradient of intent also would apply to the actor's perceptions of his or her own behavior. To our knowledge, this issue has not been investigated, although distinctions have been made in terms of the perceived legitimacy or justification for aggressive acts (see Tedeschi & Felson, 1994). However, it seems likely that such a gradient would exist, especially for harms associated with risky behavior. For example, a person can be aware that driving while intoxicated increases risk of harming others but not perceive that he or she actually intends to harm others. A similar distinction was described by Malle and Knobe (1997), who identified five general dimensions of intent, including not only intending the act and having the necessary skill to effect the act but also desiring an outcome, believing the outcome will happen, and being aware that the act would result in the outcome. Thus, one important direction for future research is to explore the extent that actors see their own intent as ambiguous and how this influences the process of their own aggression and their reactions to

responses from targets. One practical implication of the present findings is that it may be useful to develop interventions with violent offenders that create better awareness about both the intentions of others and how others attribute intentions relating to the offender's behavior. This may be especially important for alcohol-related aggression because alcohol impairs the ability to assess the intent of other persons (Zeichner & Pihl, 1980).

### Study Limitations and Future Directions

This study has a number of limitations primarily related to conducting research in a barroom context. First, although the principles related to harm, intent, and the nature of aggression would be expected to apply generally to aggression, the relative proportions of specific types of aggression and the relationships among these variables would be typical of the kinds of bars and clubs included in the study and would likely differ in other contexts, such as the home, workplace, school, or prison. In addition, although this research includes a range of severity of aggression, the results are dominated by relatively minor aggression. At the same time, the results are informative because barroom contexts are very common sites for aggression among certain segments of the population (Archer, Holloway, & McLoughlin, 1995; Graham et al., 2002; Lang, Stockwell, Rydon, & Lockwood, 1995) and are therefore important locations, in their own right, for the study of aggression.

A second limitation of the research is that certain types of aggression would be both less likely to occur and less likely to be noticed in noisy, crowded barroom settings. This would apply especially to less overt forms of aggression, such as passive or indirect aggression. A third limitation is that due to the noisy barroom environment, observers often could not hear verbal aspects of aggression and had to rely on facial expressions and body language. Thus, there is perhaps more ambiguity in these data than in observational data collected in settings where verbal expressions are audible. On the other hand, verbal exchanges tend to be relatively rare in noisy clubs and bars because of the difficulty of being heard, so most non-physical aggression that does occur is typically expressed through facial expressions and body language.

Despite these limitations, this study has important implications for our understanding of aggression. The data are unique in providing systematic and objective descriptions of naturally occurring aggression among adults. As part of the analysis of these data, we developed a new methodology for measuring severity of aggression in naturalistic settings based on ratings of harm and intent that could be applied within a variety of research approaches to aggression, including surveys, experimental research, and

research on partner aggression. This methodology, along with improved statistical methods for handling complex, multilevel data, can be used to supplement qualitative (e.g., Luckenbill, 1977) and theoretical approaches (e.g., Tedeschi & Felson, 1994) to understanding the process and complexity of aggressive interactions, thereby moving aggression research beyond methods that use a more one-dimensional focus on aggressive acts or aggressive individuals.

Our results present a complex picture of aggression that is relevant to how aggression is conceptualized and measured. First, aggression takes a variety of forms, and these forms vary by gender. Second, there was considerable variability in harm and intent for at least some forms of aggression, suggesting that behavioral labels of the form of aggression are insufficient as indicators of aggression severity. Finally, an important finding from this research is that intent may be more a matter of degree than the "all-or-nothing" phenomenon characterized by existing definitions of aggression. In sum, the different forms and levels of aggression and the different kinds of intent are critically important issues in real-world aggression that need to be given greater attention in future research.

## NOTES

1. Rather than dropping one fairly aggressive bar from the study because it had its peak attendance earlier in the evening and routinely closed shortly after midnight, the visiting time for this bar was changed to 10 p.m. to midnight for both the pre- and postintervention observations.

2. See [http://publish.uwo.ca/~kgraham/safer\\_bars.html](http://publish.uwo.ca/~kgraham/safer_bars.html) for a copy of the training manual.

3. It should be noted that sexual overtures (even invasive ones) were common in the bars in the study and usually wanted; sexual overtures were only considered aggressive if the overture was clearly unwanted.

4. Acts in which there was no target or the target was not present included hitting an object in anger (e.g., punching a pool table or video game or hitting the wall with a pool cue from frustration, banging the table over a game on television, slamming a beer bottle on the table, punching the wall, slamming a telephone receiver where anger was apparent but the reason was unknown), insulting remarks made about a third party who was not present ("He's a jerk, asshole, idiot"; "he smells") or about the bar ("This bar sucks"), making threats about a person who was not present (e.g., "If he comes here tonight, I'll kill him!"), expressions of anger sometimes in reaction to aggression by someone who had left the scene or did not hear ("That guy just grabbed my ass!"), and impersonal anger (a man ranting angrily to the television). The most frequent type of act in which the target was present but unaware of a possibly aggressive act was a dirty, angry, or annoyed look directed at the back of someone who had bumped, made a sexual overture, or in some other way infringed on the person. Other acts included serious anger or aggression that was expressed but did not reach the target, sometimes because of intervention by a third party. For example, in several incidents, a man was staring angrily at someone and looking like he was going to go after the person but was stopped from doing so by a friend. In others, anger about a person present was expressed as verbal insults and threats but the person did not hear. Other acts involved

aggressive gestures, such as pretending to grab or bite a woman's bum where the woman was unaware.

5. Based on an overall harm measure of 0 = no harm, 1 = minor non-physical, 2 = moderate-severe nonphysical, 3 = minor physical, 4 = minor physical with moderate-severe nonphysical, 5 = moderate physical, 6 = moderate physical with moderate-severe nonphysical, and 7 = severe physical.

6. In general, aggressive behavior by staff was qualitatively different from behavior of patrons in that staff were almost always aggressive either as part of rule enforcement or to intervene with aggressive patrons and rarely gave evidence of full intent to harm. Therefore, the results refer exclusively to patron aggression.

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