

## Is this Stall Taken? Territoriality in Women's Bathroom Behaviour

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### ABSTRACT

Ruback and Juieng (2006) found that people who have parked a vehicle in a public parking space exhibit territoriality when an intruder is waiting in a car for the same spot. They argue that a parking space represents a small, temporary territory that one may feel compelled to possess and defend. Based on this study, we investigated whether these findings could be extended to the context of women's public bathroom stalls, which are similar to parking spaces in that they are temporarily occupied and have clear boundaries. We hypothesized that women take longer to exit a bathroom stall when there are others waiting. We conducted an observational study where women were timed for how long they spent in the bathroom stall when there was no one waiting, versus when there was a line, in two locations. Overall, the hypothesis was not supported, as average time spent in the stall did not significantly differ according to the presence or absence of waiting individuals. However, in one sample where there may be a sense of camaraderie, tentative results suggest women take longer in the stall when there is no line. In the second sample where individuals do not know each other, there was no difference. We discuss the need for examining territorial behaviour in modern contexts, and the importance of human ethological research.

### KEYWORDS

Bathroom, Territory, Women, Privacy, Observation

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Territoriality has been a long favoured topic in research dealing with the biological underpinnings of behavior, such as seen in evolutionary psychology or ethology. For example, Ardrey's (1966) book on the 'animal origins' of human territorial behavior explored issues such as property ownership, and the creation and defense of nations. Likewise, Lorenz's (1963/1966) work on territoriality addressed how it motivates aggression. Along a related line, Eibl-Eibesfeldt (1970) defined it as "any space-associated intolerance...where a 'territory owner' is that

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animal before which another conspecific must retreat” (p. 309). Although these ideas became a cornerstone of work within the scholarship of human territoriality, thoughts about an ‘instinct’ for territoriality were met with some controversy (most significantly, Montagu, 1968; see also La Barre, 1969).

Over the decades, studies on human behaviour have pushed territoriality to the side, although there have been sporadic contributions, such as incorporating territoriality to explain abandoning goods at a store at closing time (e.g., Ashley & Nobel, 2014). Generally, since the 1970s, there has only been an occasional article. For example, Ruback and Juieng (2006) examined territoriality of public parking spaces, while Ruback and Snow (1993) studied territoriality at drinking fountains. Ruback, Paper and Doriot (1989) proposed that while people may flee some public territories, they will defend an area, such as a public phone booth, if a specific task needs to be performed in that location. In these three examples by Ruback and associates, the key variable was time spent continuing a behavior (e.g., drinking at a fountain) versus abandoning the space when an intruder entered into close proximity. Using the logic of these papers, and the findings of Ruback and Juieng (2006) as a springboard, in the current study, we examine territoriality in women's bathroom stall behavior. Specifically, we explore how the presence or absence of others waiting to use a bathroom stall, which we consider as a temporary, clearly defined territory, influences the time one occupies the space.

To conceptually frame this work, we begin with an overview of theories concerning territoriality. We propose that such a review may be useful to some readers of this special proceedings issue, given that those starting their careers in evolutionary perspectives of human behaviour may not be aware of this literature. We then outline our study, and discuss the importance of using observations to examine human behavior. We also review the importance of this study with respect to undergraduate student educational development.

### **Territorial Behavior in Relation to Privacy and Control**

Territoriality in humans has been examined from a multitude of perspectives, with the vast majority of this work occurring in the 1960s and 1970s. Edney (1974) reviews issues surrounding definitions and conceptualizations of human territoriality, concluding that the key differentiation resides in the matter of defense. Some definitions include active defense as the central consideration, others consider defense with additional variables, and a third group excludes defense. Our work is situated in this third group, and fits best with the definition offered by Proshansky, Ittleson, and Rivlin (1970) as “achieving and exerting control over a particular segment of space” (p. 180). Moreover, we argue that bathroom stalls, the territory in our study, meet the criteria outlined by Antonsich (in press), where territory is delimited by borders for which power, in whatever form, is exercised.

One advantage of some territories is that they create privacy for individuals, where they can decide what information is communicated with others (Edney, 1974). Bathroom stall behavior is inherently about privacy and thus, we rely on the theorizing of Pastalan (1970) who connects territoriality with privacy and suggests, “privacy may constitute a basic form of human territoriality” (p. 88). Pastalan continues that privacy enables individuals to have a context or environment for emotional release and psychological protection, but most importantly, enables them

to gain a sense of control. We use the argument proposed by Proshansky et al. (1970) that individuals in all situations attempt to organize their environment to maximize their freedom, and psychological privacy readily serves this goal. Thus, to achieve maximal freedom, one controls what goes on in a particular space (Proshansky et al., 1970) and consequently, “the inner determinant of territorial behavior is [the] desire to maintain or achieve privacy” (p. 180).

According to Sack (1986, p.1), human territoriality is optimally considered “as a spatial strategy to affect, influence or control resources and people, by controlling an area.” We are in disagreement with the theoretical position of Sack, as he argues that there is no instinctual basis for territoriality and openly downplayed the work of Lorenz. For Sack, the fact that territoriality is a spatial strategy leads him to posit that feelings and actions surrounding it can be elicited or stopped at will, according to the situation or the motivations of the individual. The intriguing outcome of his conceptualization is that it explains how space may be considered a territory that is bounded and controlled in one instance, but not in another. We agree that spaces may serve multiple purposes: for example, an empty public bathroom that one enters to clean may not be considered a territory, but when one enters to engage in private activity and locks the door, the same room becomes a territory.

Sack also raises the issue of scale, in that any space, even one that is small, such as a bathroom stall, may be considered a territory (also see Antonsich, in press, for a review). He writes (1986, p. 19) that territoriality is “the attempt by an individual or group to affect, influence, or control people, phenomena, and relationships, by delimiting and asserting control over a geographic area. This area will be called the territory.” This definition further suggests that any individual has the power to exercise control over the space. Extending this idea further, his definition suggests that a territory is the consequence of using boundaries, such that its existence rests on the creation, maintenance, and enforcement of boundaries. Antonsich (in press) proposes that these boundaries are a form of social communication that mediate the interaction between individuals. Therefore, according to this perspective, bathroom stalls are territories for which individuals control access.

### Past Studies of Territorial Behaviour

The current study on bathroom stall behavior is situated within the framework proposed by Ruback and Juieng (2006), who studied territoriality of parking spaces. They argue that parking spaces are a small territory for which individuals may control access for a temporary period. Individuals may possess and defend the boundaries of the space to maintain ownership, and people who have parked a vehicle in a public parking space become territorial to intruders waiting in their car for the space (Ruback & Juieng, 2006). Specifically, they found people take longer to vacate the space when someone in another vehicle is waiting for it, as compared to when there is no one waiting. Ruback and Juieng (2006) also found that people take an even longer amount of time when the person waiting displays impatience (e.g., honking).

### Current Study

We extend these findings to bathroom stalls, which have not been explored and have several similarities to parking spots. Both are small spaces that are occupied temporarily. Both parking spaces and bathroom stalls invoke privacy, as the individual is occupying a space that is socially accepted as being temporarily owned; the person then has the freedom to do what they wish in the confines of the space (i.e. maximizing freedom). Thus, based on Ruback and Juieng's (2006) findings, we hypothesize that the average time that women spend in a bathroom stall will be significantly greater for women who enter the stall when there is the presence of individuals waiting to use the stall (i.e., 'line condition') versus the absence of waiting individuals (i.e., 'no-line condition'). To test this hypothesis, we conducted an observational study using multi-stall bathrooms, where women were timed for how long they spent in the stall for the two conditions.

We note that we examined exclusively women and not men because men often may use a urinal, which does not have clear boundaries with walls, for example, instead of a stall. While the findings from the literature we have cited typically applies to both sexes (i.e., both sexes exhibit territoriality over parking spaces), there are nuances. For example, men vacated their parking space when the intruder was driving a high status versus low status car, but there was no parallel effect for women (Ruback & Juieng, 2006). There may be similar small differences for bathroom behaviour; men who select to use a stall may vacate the stall more readily if they notice the intruder has high status. However, this raises a secondary issue. Men are presented with a choice in bathrooms, and aside from bodily demands, there may be personality variables (e.g., shyness) involved in the decision making process. Based on the different options for men than women in bathrooms (e.g., urinals versus stalls for men, and only stalls for women), we decided to focus solely on women's behaviour.

### METHODS

We performed the study across two locations. In the first location, we observed 20 women in bathrooms at a mid-sized university in Eastern Canada. In the second location, we observed 19 women in bathrooms at an indoor public farmer's market, which is highly popular with locals as well as tourists. The method for both locations was identical.

It is critical to highlight the rationale for collecting data at the two locations. We first started data collection at the university, based on convenience. In order to reduce risk of detection by targeted subjects and others, observations were spaced such that they occurred approximately once weekly. However, it quickly became apparent that the culture of this small university is not based on anonymity but instead on camaraderie. Anecdotal evidence suggested women exiting the bathroom stalls often acknowledged the other women waiting in line with eye contact, holding the door open, or initiating verbal communication. Therefore, we thought it possible that women within this context may release the territory faster (i.e., exit the bathroom stall quicker) if they knew a fellow student or member of this

university community may be waiting. To test this possibility, we began data collection at the large, public farmer's market, which does not have the same level of camaraderie and where patrons are unlikely to know each other.

In order to collect observations, two female researchers entered a multi-stall bathroom with or without a line of individuals waiting for the stalls. In some cases, female confederates were used to artificially create lines; we noticed that lines tended to be a relatively rare occurrence, and individuals, upon seeing a line, sometimes immediately exited the bathroom. In such cases, confederates entered the bathroom separately, formed the line, and did not communicate with each other or with the researchers. For our study, one researcher occupied a stall while a second researcher acted as a waiting friend. The second researcher did not enter the line (in the line condition) and instead went to the sink or mirror area and made the appearance of grooming herself. The second researcher then started to use her cellphone (e.g., to engage in texting or emailing) but was actually using the stopwatch to time stall occupancy of the target subject. The use of two researchers was necessary in order to reduce suspicion or detection by the target subject, particularly in the no-line condition.

Timing of the target subject commenced once she entered the stall, as determined by her touching the handle or door to enter. The timer stopped as soon as the subject opened the door to exit the stall.

## RESULTS

A one-way Analysis of Variance Model (ANOVA) was created in order to compare the mean times of stall occupancy for women in the line and no line conditions, with the sample location (i.e., university vs. public market) as a second independent variable. Overall, subjects in the 'no line' condition took longer in the stall ( $M = 88.12$  seconds,  $SD = 46.29$ ) than the 'line' condition ( $M = 65.41$ ,  $SD = 20.69$ ), but this difference was not significant,  $F(1, 38) = 3.59$ ,  $p = .066$ . The difference in location was also not significant,  $F(1, 38) = 0.76$ ,  $p = 0.39$ , and the interaction of condition with location was likewise not significant,  $F(1, 38) = 0.28$ ,  $p = 0.60$ .

For exploratory purposes, we examined the two locations separately (noting that the main effect of location in the ANOVA sample was not significant) to see whether there was a trend for subjects to be faster in the line condition, as we had unexpectedly casually observed. Examining the samples separately, within the university context, the 'no line' condition took significantly longer in the stall than the 'line' condition, independent samples  $t(18) = 2.50$ ,  $p = 0.022$ , but there was no difference in the public market,  $t(17) = 0.77$ ,  $p = 0.45$ .

## DISCUSSION

Our hypothesis was not supported, as the average time women spent in bathroom stalls was not significantly longer when there was a line of waiting women

versus women who entered the stall when no one was waiting. While those in the 'no line' condition took significantly longer in the stall than the 'line' condition at the university, there was no difference between the groups at the public market. We speculate that this finding is due to a sense of camaraderie at the university, leading people to be more considerate of others' time who are waiting in line for the bathroom. Given the size of the university (approximately  $N = 7,000$  students), and the strong emphasis by the administration for all members to perceive the university as a community, it is likely that there is an influential sense of community. Past research on town versus city size indicates a stronger sense of community (i.e., "camaraderie") with smaller population size (Prezza & Costantini, 1998), which may explain the difference we have tentatively found between the university and the public market. We note that the public market serves a community of approximately 420 000, but is also listed by many sources as a main tourist destination and indeed, is adjacent to the cruise-ship port.

We have failed to replicate earlier work involving parking spaces. However, a critical difference between a parking space and a bathroom stall is that the latter involves human waste and may be associated with germs, eliciting a disgust reaction. Therefore, while a bathroom stall offers privacy and the walls clearly delineate a territory, the territory is not a highly desirable one. It would be useful to examine how a similar space without the issue of human waste, such as a private change room at a public swimming pool, compares to these results.

Sample size is an obvious limitation to the current study. Similar to most buildings, there were few multi-stall bathrooms at the locations we used in this study, forcing the researchers to often collect data in the same places. In order to avoid conspicuity, and potential demand characteristics, it was necessary for the researchers to spread the sampling by several days or weeks, making it challenging to collect a larger sample. Thus, future iterations of this study may benefit from collecting data in locations that have more (and potentially busier) bathrooms in order to maintain control while also producing a larger sample. We did examine several popular restaurants, theatres, and sporting arenas to determine whether there existed lines in these locations. However, we casually observed that most people seem to wait until the person who has walked to the bathroom has returned in restaurants. At theatres and sporting arenas, there are a large number of stalls available (to the point that there are very short lines, if any). Moreover, in the latter two locations, there is the possibility of a time restriction; people do not want to miss their show or sporting event. In the future, researchers may wish to expand the current study to examine these issues.

It would also be interesting to explore sex differences in behaviour. There may be sex-specific variables that cause men versus women to vacate the bathroom stall faster. Recall, for example, that the type of car an intruder was driving led men to vacate the parking space differently; if the car was a high status one, men left faster than if it was a low status vehicle (Ruback & Juieng, 2006). An analogous prediction would be that if a man notes that a person waiting for the stall has high status or dominance, he may leave the stall faster than if the intruder has low status. Likewise, if a woman notices that the person waiting is more physically attractive, she may vacate the stall faster than if the intruder is unattractive. These predictions align with documented sex differences in intrasexual competition; men

often compete with each other via status (including visible indicators of wealth), whereas women often do so via physical attractiveness (see Fisher, 2013, for a review).

A final consideration for future studies is the time of day that observations are collected. In this study, we inadvertently collected the majority of the data for the 'no-line' condition at the university in the mornings (i.e., before 11:30am), whereas we collected the majority of the data for the 'line' condition at the public market during this time. This empirical oversight does align with the natural flow of the target subjects; at the university, the bathrooms are typically less busy in the mornings than in the afternoons. Likewise, the public market is often much busier during the morning than it is later in the day. Although ecologically valid, in that the conditions for observations were aligned with the natural behavior of target subjects, the importance of considering such issues must be noted.

We fully acknowledge that the publication of articles that yield unexpected findings (and lack of significant findings) is rare. However, after reflection, we believe that the current study has value. First, it draws much needed attention to human territoriality, which has remained almost completely overlooked for decades. Indeed, a cursory scan of the table of contents for several environmental psychology textbooks reveals a total lack of information on territoriality. In addition, the idea of a temporary territory, and how territory relates to privacy, has been highly neglected in the literature. Second, the novelty of the topic is noteworthy; many of us visit public bathrooms repeatedly throughout the day, yet there remains very little research on bathroom behavior. Third, this paper highlights the ways in which a team of undergraduate students may move forward from an initial observation to an actual study, which has been one ongoing issue addressed by this journal. Indeed, the mission statement of the journal, according to the current website is "to promote the education of evolutionary theory in colleges and universities" (<http://evostudies.org/evos-journal/>). Evolutionary psychology is an important discipline but remains understudied within many universities; indeed, there appears to be only a handful of universities in Canada (our home country) where it is listed as a formal course. We propose that although the current study did not yield the expected findings, it does clearly show how one may use daily observations as a spring board for undergraduate educational development.

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