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Brief Reports

ARE YOU LOOKING AT ME? STUDENTS TEND NOT TO SIT FACING STRANGERS

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ABSTRACT

Eye contact is associated with multiple human social functions. These include social dominance displays or contests and signaling interest in potential romantic partners, functions more prominent for men and women respectively. People may actively avoid situations that could create a dynamic of initiating social attention without further communication. We observed seating patterns in a university cafeteria during off-peak hours. We predicted that individuals arriving alone would avoid sitting facing others and that women would be relatively less likely to sit facing a male stranger than vice versa. Only 14% of individuals arriving alone sat directly facing another individual not at the same table, however we did not have an adequate number of cases to reliably test the second hypothesis. We believe that evolved mechanisms regulating social interactions explain this pattern; the goals of avoiding social conflict and unwanted sexual attention continue to be important in modern environments.

Key words: *Ethology, defensible space, eye contact*

INTRODUCTION

Across primates, fixed gaze with prolonged eye-to-eye contact is a component of competitive agonistic displays (van Hooff, 1969). When dominant individuals encounter a subordinate, they typically make facial expressions thought to display anger and signal threat. These facial expressions share the common features of wide-open eyelids and staring gaze (van Hooff, 1969). Direct gazes are likely to be the most widely shared aspect of threat behavior in non-human primates, including gorillas, baboons, rhesus and bonnet macaques, and langurs, and are often sufficient for a dominant to displace a subordinate (Marler, 1965).

Humans also use eye contact to display or facilitate social dominance, as in other primate species (Masters, Sullivan, Lanzetta, McHugo, & Englis, 1986). The philosopher Jean-Paul Sartre (1943) recognized certain forms of eye contact as existentially aversive. In the first sociological work on face-to-face interaction, Goffman (1959) noted that strangers in public space may make brief eye contact, but will avoid prolonged gazing to maintain public order. Eye contact serves a broader range of functions in humans than

establishing dominance, including promoting facial recognition (Farroni, Johnson, & Csibra, 2004) and comforting in infants (Lohaus, Keller, & Voelker, 2001), initiating interactions with potential romantic partners (Eibl-Eibesfelt, 1970; Guéguen, Fischer-Lokou, Lefebvre, & Lamy, 2008; Moore, 1985), and increasing liking and attraction among adults (Stass & Willis, 1967).

Because of sex differences in the costs and benefits of reproduction, women are more discriminating in selecting mates and men exert more effort in obtaining mates (Trivers, 1972).

Men are more likely than women are to attribute sexual interest to friendly behaviors (Abbey, 1982). Still, men are generally hesitant to initiate interaction with a female stranger without some indication of interest, and repeated eye contact appears to demonstrate this interest (Crook, 1972). Eibl-Eibesfelt (1970) documented women giving a "coy glance," combining a half smile and a brief lowering of the eyes, which was used to gain male attention. Glancing behaviors are important in signaling a woman's initial interest, they are effective in gaining male attention, and other behaviors reaffirm interest after establishing initial contact (Moore, 1985).

In one experimental study, a female confederate established eye contact with men entering a bar. Men glanced at her for six seconds for every second that she initially glanced at them, and longer durations of eye contact were associated with increased rates of men smiling (Guéguen, Fischer-Lokou, Lefebvre, & Lamy, 2008). Understandably, the rates at which women make eye contact to solicit male romantic interest are context dependent. In the salient mating market context of a singles bar, female solicitations occurred at four times the rate of those in a university snack bar and seven times the rate of those in a university library (Moore, 1985).

Modern environments create opportunities for accidental eye contact. Many individuals share small social spaces, often with those who are unfamiliar to them. Repeated accidental eye contact may be aversive, given the role of eye contact in both antagonistic social dominance competitions and the solicitation of romantic interest. Mechanisms producing this psychological discomfort may have evolved for the functions of avoiding social conflict and unwanted sexual attention, with the latter function especially important for women. Mechanisms promoting tendencies to avoid accidental eye contact with strangers may still shape the behaviors of individuals in modern societies, leading people to avoid sitting in positions with high potential for repeated and/or prolonged eye contact.

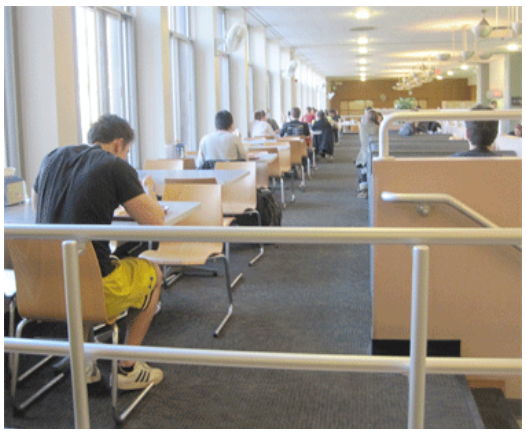
Thus, we predicted that solitary individuals entering a cafeteria with a seating arrangement potentially enabling accidental eye contact would avoid sitting facing others who would be directly facing them. Because women face greater costs in reproduction and errors in mate selection are more detrimental to their reproductive success, we also predicted that women would be relatively more likely to avoid sitting facing a male stranger than vice versa. These behaviors would be consistent with expected tendencies for greater risk avoidance in the sexual domain compared to men.

Hypothesis 1: Solitary individuals entering a social space will avoid sitting facing another person.

Hypothesis 2: Men will be more likely to sit facing women than women will sit facing men.

Materials and Methods

One female and one male observer conducted separate observations in the University of Michigan South Quad cafeteria. This location provided a suitable setting to test the experimental hypotheses, as there is a one row of small tables in a separate elevated section of the dining hall next to a set of windows (See Figure 1). There are eight tables, with two seats each on two sides of the table (four seats total). These seats are on the sides of the table perpendicular to the windows, thus someone sitting in each seat could sit facing another individual (someone sitting down in position 4 would be facing someone already sitting in position 2 if there were no others sitting in between). We conducted observations from 30 to 60 minutes between 1:30 and 5:00 pm on weekdays, intentionally avoiding peak dining hours to enable a variety of seating choices and a relatively higher proportion of solitary individuals. We recorded the seating patterns of 178 arriving individuals in nine observation sessions using a labeled seating diagram (See Figure 1). Observers recorded the number of people arriving together, the sex of each individual, and indicated whether others were sitting facing where each individual sat, and the sex of the person faced if applicable. Observers also documented the pattern of seating upon arrival; we could use the seating diagram to reconstruct seating patterns after the observational session if necessary. We examined whether seating patterns (facing vs. not facing) differed from chance with nonparametric Binomial Tests and examine sex differences in facing patterns with an Independent Samples Mann-Whitney U Test to in SPSS 20.0. We also conducted Hierarchical Linear Modeling to model seats (Level 1) nested within participants (Level 2), because the number of seats available in each category (facing or non-facing) varied by participant. This analysis examined whether there was a significant departure from randomly choosing seats, controlling for the number of seats available in each category.



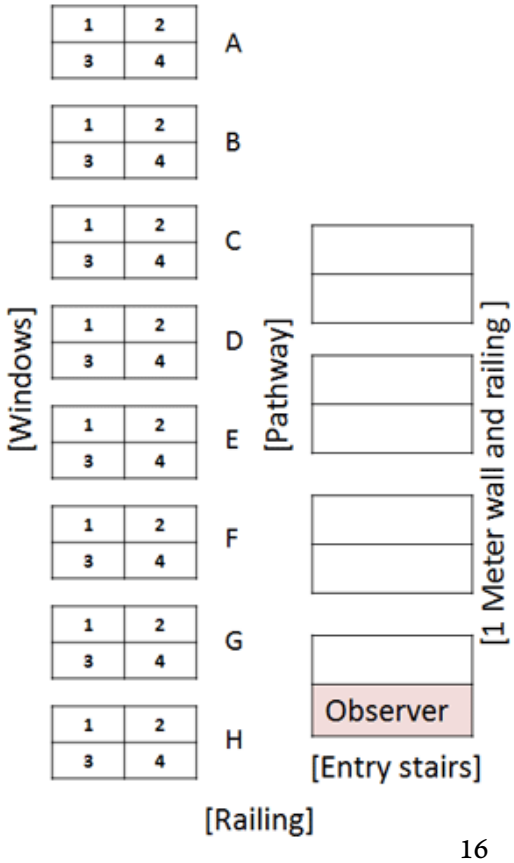


Figure 1. Cafeteria photo and seating diagram

Results

There were always multiple open seats available during the observational intervals, so every individual was able to choose whether to sit facing another individual at a different table or not. Of the 178 arriving individuals, 58% were male and 44% arrived alone (See Table 1). There was one group composed of three people, all other groups were dyads. Individuals arriving in dyads always sat facing each other. Solitary individuals never sat at partially occupied tables. Of the 79 individuals arriving alone, 65% were male, and 14% sat directly facing another individual not at the same table. Seating choice (directly facing vs. not directly facing) differed significantly from chance ($p = .004$). Overall, 73% of available seats were non-facing, 27% were directly facing other individuals. The number of seats available ranged from 2 to 28 ($M = 18$, $SD = 7$). There was no overall sex difference in the likelihood of sitting directly facing another individual not at the same table ($p = .156$). Controlling for the number of seats available in each category, individuals arriving alone were more likely to sit in seats not facing other individuals than in seats facing other individuals, $r(585) = .115$, $p = .006$. We did not have an adequate sample of events to test the second hypothesis reliably.

Table 1. Behaviors observed by frequency of observation

Behavior	Observations	Proportions
Male arrives in a group	52	29%
Female arrives in a group	47	26%
Solitary male sits facing another individual	5	3%
Solitary male sits not facing another individual	46	26%
Solitary female sits facing another individual	6	3%
Solitary female sits not facing another individual	22	12%

Discussion

In our study, individuals arriving alone tended not to sit facing a stranger, consistent with the notion that that mechanisms evolved to regulate social interactions shape the spatial behavioral dynamics of people in modern societies. Our results support the notion that evolved mechanisms with the functions of avoiding social conflict and unwanted sexual attention are influential in shaping seating behavior in modern environments with opportunities for accidental eye contact. We note that all dyads sat facing each other, indicating the importance of eye contact for socialization. Our unobtrusive observations do not reveal which motives were salient, however a combination of concerns may both separately and simultaneously contribute to this pattern. Sitting across from an unknown individual at a moderate distance may not enable comfortable conversation, yet it may lead to repeated eye contact. Given that eye contact functions as an invitation for

initiating social interaction, repeatedly making these gestures without further communication may be an awkward experience. People may actively avoid situations that could create this dynamic.

In addition to the issues discussed above, other factors are important when considering human seating patterns. Newman's (1972) defensible space theory has greatly influenced architecture and urban planning. Environments with "defensible space" enable residents to ensure their own security. Natural surveillance, the ability to effectively monitor one's surroundings, is one component of defensible space. Thus, people are more likely to sit in the corners of rooms facing outward than facing walls when given the choice. Our study setting was one section of an expansive open space. There was a glass wall on one side, but no seats were facing walls. Other rooms and seating arrangements would be more suitable to testing hypotheses regarding defensible space. In conclusion, our project demonstrates the value of an ethological approach in addressing research questions on behaviors related to the regulation of social space.

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