How Close is Too Close?: An Investigation on Proxemics in Different Environments at Iowa State University

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Literature Review

Before completing our first subcode investigation, our group conducted research surrounding proxemics. Throughout our research, we focused on proxemics expert Edward T. Hall and his contributions regarding personal space. As identified in Hall's Classifications of Personal Space, individuals have unspoken boundaries for different spatial zones. For example, intimate space can be classified as a distance anywhere from 0 to 1 ½ feet, while personal space is classified as a distance anywhere from 1 ½ to 4 feet. Similarly, social space is designated as a distance of 4 to 12 feet, and public space is classified as 12 feet and beyond (Moore et al., 2014). Although these estimations vary across cultures, these findings initially motivated our investigation as our group wanted to examine whether these spatial measurements held up in different environments such as crowded food courts and retail stores.

For this investigation, we had to determine which space(s) related to our hypothesis. As Dr. Anjali and Mr. Emmanuel Hans describe in their studies of proxemics, they continue to use Hall's Classifications of Personal Space but go on to define each space in a broader sense. As it relates to our investigation, we decided to focus on the zone of personal space. According to the Hans researchers, the starting point for personal space begins at the physical body and extends 4 feet (Hans & Hans, 2015). Furthermore, as supported by their research, personal space is where most communication occurs, as it is primarily used with friends, family, and significant others (Hans & Hans, 2015). This second research conclusion motivated our investigation as our group wanted to examine whether personal space violations would be noticed, confronted, or allowed depending upon the environment in which participants were in.

The third research conclusion that motivated our investigation involved examining how the COVID-19 pandemic shaped our perception of space. During the pandemic, people not only

chose to stand farther away from one another in public spaces, but some establishments required social distancing. Using this knowledge, we wondered how people would measure distance in a public space post-pandemic. According to a study conducted in 2021 that was designed to assess the satisfaction levels of customers in restaurants during the pandemic, researchers came to the conclusion that social distancing measures didn't affect overall satisfaction toward the restaurant, even when they were strictly followed (Song et al., 2021). After reviewing these findings, we wanted to determine how individuals would distance themselves across multiple environments in a post-pandemic world.

Finally, our group was curious about the impact of gender and proxemics. Specifically, we wanted to try and note participants' gender and how far away they would stand from each other. Gender plays a significant role in all aspects of nonverbal communication. For example, according to *Perceived Power: Nonverbal Communication and Masculinity in Public Space*, how someone stands in public can be perceived as powerful (Perry, 2012). This research seemed pertinent to our investigation as we believed we could observe how men and women show their "perceived power" through proxemics. Furthermore, according to our textbook, greater distance is required in M:M interactions than is required in F:F interactions (Moore et al., 2014). These research conclusions prompted us to focus on how gender differences can affect spatial boundaries and the caution both genders take in a public space.

Ultimately, we felt our investigation was necessary because we wanted to examine how proxemic considerations, such as the distance individuals allow in different environments, have changed across time and space. Although we hypothesized that individuals would stand closer in a food line than a bookstore line, our main goal was to demonstrate the role of proxemics at our own institution, and how influences such as gender and the pandemic impact this area of study.

Hypothesis

In the Memorial Union, individuals will stand closer together in line for Lance & Ellie's than they would if they were in line at the ISU Bookstore.

We believe our hypothesis represents an important area to focus on as proxemics impacts our everyday lives, even if we don't consciously acknowledge the concept. Furthermore, we wanted to examine Edward T. Hall's Classifications of Personal Space and decide whether his phenomena apply in different environments at Iowa State University, something that likely hasn't been done before. Finally, our hypothesis represents an important area to focus on as perceived violations of space, especially in a post-pandemic world, are understudied.

Methods

Our group conducted a field observation in Iowa State University's Memorial Union. Because one of our group members (Pavle) was sick on the day of our investigation, he was unable to help run the experiment. Therefore, the other four group members were able to run the field observation. Our group conducted this observation at Lance & Ellie's and the ISU Bookstore. The participants in our study were Iowa State University students, staff, and visitors. These groups were defined through their outerwear in the form of backpacks, university employee apparel, and visitor folders and duffel bags. We conducted the first part of our investigation on Friday, March 7th, while conducting the final part of our investigation on Wednesday, March 12th. On March 7th, we observed the Lance & Ellie's line and the ISU Bookstore line from 12:00 p.m. to 1:00 p.m. We chose to observe on a Friday and during this time frame because we believed it would result in large crowds at both locations. Unfortunately, this time frame did not yield many results for the ISU Bookstore, so we decided to continue our

investigation on Wednesday, March 12th from 12:30 p.m. to 1:15 p.m. In the investigation, our roles differed depending upon the environment we observed. After measuring the floor tiles in the Lance & Ellie's line with a tape measure (about 11.5 inches each), two of us sat at a nearby table to count the number of tiles separating those waiting to get their food. Similarly, in the ISU Bookstore, two group members taped off tiles of the same distance and discreetly monitored how far individuals stood apart from each other in line to check out. As this investigation was a field observation, we refrained from inserting ourselves.

Results

Table 1: Lance & Ellie's Data

Participants	Estimated Distance (in tiles)
1	2
2	2
3	2
4	2
5	1
6	1
7	2
8	3
9	2
10	2
11	4
12	3
13	2
14	1
15	3
16	2
17	2
18	2
19	2
20	2
21	3
22	4
23	2
24	1
25	3
	2.2

Table 2: ISU Bookstore Data

Participants	Estimated Distance (In Tiles)
1	2
2	2
3	2
4	7
5	5
6	4
7	2
8	2
9	5
10	5
11	10
12	1
13	1
14	1
15	7
16	8
17	7
18	3
19	5
20	7
21	4
22	1
23	4
24	5
25	7
	4.28

Analysis

As shown in the tables above, our results support our hypothesis. We predicted that individuals would stand closer in the Lance & Ellie's line and that is what our data shows, as demonstrated by the averages at the bottom of the tables. According to the tables, the average distance between individuals in the Lance & Ellie's line was only 2.2 tiles. According to data collected at the ISU Bookstore, the average distance between individuals in line was 4.28 tiles.

When comparing our results with those from the research summarized in the literature review, we found that individuals seemed to be invading the classification of personal space in the Lance & Ellie's line. On average, individuals are around 2 tiles apart, which can be calculated to be around 23 inches or about 2 feet. This invades what is designated as one's personal space, but as we noticed throughout our investigation, individuals didn't seem to mind. Moreover, in the ISU Bookstore line, individuals seemed to be more respectful of each other's personal space, standing a distance of about 4.28 tiles away.

Throughout our investigation, we did our best to observe gender differences and record anything of significance. Some things we observed included the fact that men seemed to stand farther away from one another, even when familiar. One example we noted at the ISU Bookstore included a M:M interaction in which individuals were about 7 tiles apart. Contrastingly, familiar women stood closer together, sometimes less than 1 tile apart. This supports the research we discussed in our literature review, as men seem to require more space. Furthermore, in regards to the relationship between how one stands and power, we noted that at the ISU Bookstore, women seemed to stand behind the entrance to the cash registers, while men stood within the entrance. Although this wasn't something our group was directly studying, it has important implications for how men and women navigate shared spaces.

After discussing our results as a group, we were surprised that individuals let strangers violate their personal space in the Lance & Ellie's line. Although our research suggested that this zone is where most communication occurs, we expected individuals to stand farther away from each other than they did, as many people waiting in this line are unfamiliar with those around them. Finally, the results for the ISU Bookstore line were consistent with our expectations. As there are less people in the ISU Bookstore, and likely less internal and external noise, distance becomes more salient in an individuals' mind.

Discussion

After analyzing our results, our group discussed how they can be applied to the world around us. First, we determined that violations of personal space don't seem to be as severe or dramatic when waiting in line for food. This may be due to internal factors, like hunger, becoming one's priority. Also, it could be due to an implicit distance "norm" being created by the large number of individuals in one area and the lack of space. Furthermore, restaurant environments could play a role in how individuals space themselves in regards to others, which may be another research area to examine. For example, researchers could investigate the question "How does the environment created by restaurants impact proxemics and proxemic violations?" Next, we learned that it's better to maintain greater distance in retail spaces. It seems as though nonverbal cues are more prevalent and strict in these spaces. Although our results did not provide an exact reason for this phenomenon, we believe practices from the pandemic may be salient in people's minds. Finally, we believe more research could be conducted regarding proxemics and gender. Specifically, how men and women feel about proxemics violations in different environments.

Limitations

If we were to conduct this investigation again, we would do a few things differently. First, we would have collected a larger sample as 50 individuals is not representative of the population at Iowa State University. Next, we would conduct our investigation when the weather is warmer. Unfortunately, on the Friday in which we conducted our initial investigation, it was cold and rainy. This likely resulted in less people spending time at the Memorial Union. Also, we would have stayed later at the ISU Bookstore during our initial investigation, as we ended up having to go back to collect more data. In the future, we would consider including university employees in our research as it would result in more covert data collection. For example, one participant who might have been better equipped to provide useful data would have been an ISU Bookstore employee. If they marked the distance between customers using a clipboard behind the register, they could collect more precise data without looking out of place or suspicious.

Conclusion

In conclusion, our investigation supported the notion that proxemics considerations are less prevalent in food settings than in retail settings. These results are impactful, as they create more awareness surrounding proxemics at Iowa State University, and how this nonverbal code can be managed in the midst of a global pandemic and differences in gender.

References

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