

# Tendency of left and right brain dominance determining seating preferences



## **Abstract**

Right and left-brain hemisphere bias was studied in participants that were asked to choose a seat within given conditions. The study predicted that individuals tend to exhibit a right bias when choosing a seat in a movie theater; and leftward bias when selecting a seat in the biology lecture. A total of 16 participants utilized a visual map to select a seat preference in either a movie theater or biology lecture. The study concluded right side bias indicates right brain hemisphere dominance when choosing a seat preference in the movie theater. Leftward bias was not observed in the biology lecture in the current study. The findings are consistent with previous research of right side bias, confirming dominant brain hemisphere has an overall influence on seating preference.

## **Introduction**

An individual's seating choice is based on a several external and internal factors. There is a correlation between seating preferences and the environment that is not always acknowledged by the individual. The human approach is influenced by the way the left and right side of the brain processes decisions. The two hemispheres impact the behavioural bias which affect an individual's choice in different conditions such as a movie theatre or a biology lecture.

The left and right hemisphere uses different strategies to process and interpret information. Previous studies have concluded that right side bias is evident when individuals are choosing seats in a movie theater. According to the Harms, Reese and Eilas (2014), the peripheral view of the left maximizes <https://assignbuster.com/tendency-of-left-and-right-brain-dominance-determining-seating-preferences/>

the process of receiving knowledge to the right hemisphere. This process ensures information is being captured in the most effective sense.

Furthermore, Gur, Gur and Marshalek (1975) also indicate that the right side of the brain is used to process topics that are known to have an artistic aspect associated with it.

The studies indicate that the left side of the brain transmits information and is processed differently. The left hemisphere controls logical and literal thought processes therefore affecting seat choice for a biology lecture. Gur et al. (1975), also states that the left side of the brain is utilized to process scientific and mathematical data. Okubo (2010), states that the left side of the brain primarily exhibits approach related behaviour. Prior studies have suggested that possibly left handers are likely to choose the seats to the left based on theory of left hemisphere dominance.

Functional asymmetry between hand dominance and brain hemisphere has shown to affect one's behaviour. Evidence proves that right-handed individuals choose the right side of the movie theater in relation to being motivated about the film (Okubo, 2010). Okubo (2010) uses the findings conducted by Karev (2000) to establish the right hemisphere being responsible for the emotional and visual aspect of the brain. Furthermore, Weyers, Milnik, Mueller and Pauli (2006), also indicated that right-side seat choice was preferred overall in right handers based on emotions.

Subsequently, this suggests that thought process occurs in the right hemisphere and choice is made based on optimal brain processing, without even realizing it.

Visual tendencies will influence and also support the conclusion of seat preferences. Gur et al. (1975) observed that the direction of eye movement predicts seat choices. Left movers are more likely to choose the right side of the room to facilitate right side brain dominance. Consequently, right movers tend to choose left side seat preference to facilitate left hemisphere dominance. Individuals process their thoughts and decisions for seat choice by formulating preferred lateral movements and tendencies. Weyers et al. (2006) suggests that eye movement and head turning to the right creates a rightward bias when only one option for theater entry is given. Harms et al. (2014) also explored the theory that seat choice influences the participants selection when given a visual chart to mimic the real-life atmosphere. Studies prove that when participants visualized the movie screen at the top of the map, it created a favorable right-side bias seat preference (Weyers et al, 2006). These factors prove right side bias when given the conditions for the movie theater.

According to Weyers et al. (2006), seat choice can be based a prior experience. An individual's experience can be a motivating factor in seat preference based on the conditions of timing and content being viewed. The expectation bias can in turn affect the mood of the individual, causing impact on seating choice. Okubo (2010) examined a study conducted by Luck (2006) suggesting that participants exhibiting mental health issues such as depression for example produce the opposite of rightward bias. Possibly when motivation is low, a participant's seat choices is influenced by negativity, resulting in left-side preference. Therefore, participants with

positive motivation and attitude will result in right side bias seat selection to facilitate the right brain hemisphere.

The present study will be evaluating the tendencies of the right and left-brain hemisphere in different given conditions. Based on prior research, our study predicts that participants will tend to choose a seat to the right side as opposed to the left side in a movie theater. In contrast, we hypothesised that participants will favor the left side seat preference based on relative data in a learning environment such as a biology lecture. These results will aim to conclude the theory that brain hemisphere dominance is affects our actions.

## Methods

### Participants

Seventeen undergraduate students (1 male and 16 females) were involved in this experiment. Participants that took part in this study are Brock University students enrolled in Psychology 1F90 in seminar 18.

### Measures

Students were given a piece of paper that represented a sketch of a movie theatre or biology lecture in the seminar room. The environment contained one hundred seats, which excludes the centre seats. An even number of seats on the left and right side were available to choose from. The screen or lecture platform was place at the top of the page . Both diagrams were given perfect conditions of sight and hearing in all areas of the room with suitable ventilation.

## Procedure

Participants were unaware of the different scenarios prior to distributing the paper. The piece of paper was randomly given to each student, fluctuating between both scenarios. All students were asked to avoid looking at the other participant's paper when filling out their results. A short description was provided at the top of the page. The participants were asked to imagine they were attending either a movie theatre or a biology lecture. Based on these conditions, students were asked to indicate on the paper where they would prefer to seat. The participants were asked to turn the page over to score their seat placement using the scoring key given. The scoring sheet provided on the back of the sheet and indicated a number corresponding to the preference of the left or right side of the rooms.

## Results

Based on prior research, the left and right side of the brain exhibits different motor functions. The right side is used to process creative and graphic information. The left side of the brain is used to process analytical information. As predicted, right side seating was preferred by participants in the movie theatre sample. Five of the eight participants given the movie theatre scenario favoured the right side. In contrast, there was an equal number of students that chose the left and right side, resulting in no preference in seating in the biology lecture. The results from this study confirms the hypothesis is based on data given. The mean score of the movie theatre is 5.4, while the biology lecture has a mean score of 4.8. The difference between the mean scores represents a range from (-2.6) - (+4).

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4), resulting in a positive difference of 0.6. Although the hypothesis was supported, the results were conducted out of random chance. Students were given the same conditions despite the scenario which concludes the unsystematic chance of obtaining these results.

## Discussion

The current study investigates two different conditions that evaluate bias choices based on brain hemisphere activity. When participants were asked to choose a seat in a movie theater, seats to the right side were favored indicating a rightward bias. Leftward bias was inconclusive when participants were asked to choose a preferred seat in a biology lecture indicating equal right and left side choices. As previously mentioned, overall right-side seat choice is preferred by participants which confirms right brain hemisphere dominance.

The results are consistent with Gur et al. (1975) findings, which evaluates eye movement in relation to seat choice. It can be assumed that more participants are left eye movers since the results showed right side seat preference. This finding supports how eye movement influences the use of right or left brain when choosing seat preference. It should also be noted that the exclusion of seats in the center of the page confirms the validity of the results. Harms et al. (2014) The limited seat selection presented to the participants is in correlation with the previous study which confirms right side bias when given certain conditions. Studies by both Okubo (2010) and Weyers et al. (2006) convey the significance of the screen position to be depicted at the top of the page to facilitate visualization. This directly

correlates with the current findings that information is perceived best by the right hemisphere and in turn favours right side seat selection.

Harms et al. (2014) refers to a previous study by Gilbert & Wysocki (1992) that indicates the majority of the population are right handed which affects every day behaviour. The results are consistent with the findings that possibly indicate that there are more right-handed participants, therefore seat preference favors the right side over the left in a movie theater. It should also be mentioned that a participant's emotions can affect the overall results. As Okubo (2010) believes the right-side bias is favored when positive emotions are exhibited; and the study would be altered if there is no motivation shown by the participants. Although the current study does not acknowledge the participants emotions, the setting and feelings are subconsciously present. In the given situation, the motivation to see a movie regardless of the genre would exhibit positive emotion as opposed to sitting in a biology lecture. The biology lecture is assumed to reveal less motivation and emotion and sparks possible negativity.

The current study conveys that overall right-side seat choice is preferred over the left side in different settings. As Okubo(2010) and Karev (2000) have expressed, the dominant side clearly prevails in seat selection. Based on the results, seat choice is relevant to one's behaviour and visual field. This information could be relevant to our everyday lives in how we process information and perform daily tasks. The right and left bias could affect judgement and approach. Although the hypothesis is supported in the current study, the implications would not have any drastic effect on society.



Right side dominance is a learned behaviour that is used daily without reservation or knowledge.

The limitations observed in the current study are evident with the findings. The current study excluded specific variables that could have had an impact on the results. Future studies could include a wider variety of subjects (not only undergraduate students) and more male participants. As Harms et al. (2014) discussed, the use of real-life photo images as well as calculating the number of left vs right handed participants could impact the overall outcome as well. Furthermore, if participants were given a choice of different theater map layouts a varied conclusion could have resulted. Further information such as assessing eye movements with a verbal or spatial relation a questionnaire for example could have also affected the outcome (Gur et al, 1975). It may be interpreted that the current study has limitations and restrictions therefore future evaluations should include more variables to conclude possible altered results.

## Works Cited

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