L'ORÉAL
PARiS

Project #2

Analyzing Print Ad Designs Using Eye-Movement Data

Group Number: #4

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Honor Pledge:
We pledge on our honor that we have not given or received any unauthorized assistance on this assignment.

Date: Oct 20 2021

Executive Summary

Print media advertising has been one of the most effective ways to create brand awareness. The memo analyzes a dataset containing "eye-tracking information about 35 print ads on a specific issue of Cosmopolitan magazine and their effectiveness on potential consumers from the perspective of a renowned cosmetic brand L'oreal. The ads performances were analyzed using Poisson log and Binary logit models. The project's objective is to provide suggestions for L'Oreal on improving the print ads designs. By conducting statistical analysis on SAS, we found out that placing ads on the right hand in the latter page of the magazine grabs more reader-attention and increasing brand and picture dimensions of print ads also helps attract more fixations. With more fixations, the brand recall accuracy is improved. Mindfully, the interaction of brand size and picture size indicates that only when the increase in brand size is greater than picture size, brand fixation can be optimized. Similarly, the interaction effect of brand fixation and pictorial fixation demonstrates that increasing counts of brand fixation should be more than the ones of pictorial fixation. Therefore, augmenting brand and pictorial fixation optimally helps readers recall the brand better. In the below memo, an extended analysis of the process is provided.

Introduction and Background

L'Oreal has struggled recently compared to other brands in terms of print ads response. They found that despite spending a lot on print ads, it still fails to attract customer attention and generate better brand memory. Thus, to help L'Oreal make an informed marketing investment decision for print advertisement, our team used the dataset from the eye-tracking experiment to gain insights and provide precise suggestions on improving the ad design and optimal placement of print ads on magazines.

Data and Methodology

The eye-tracking dataset includes a total of 3080 observations (35 ads * 88 participants) (Table1). Retrieved from the eye-tracking equipment, these observations document how participants react to the print ads of different brands. 11 variables include respondent ID, ad ID, brand, page number, page position, brand fixation, pictorial fixation, brand size, recall time, recall accuracy, and picture size. To get the overview of the dataset, frequency tables of brands, brand fixations, pictorial fixations, page position, and recall accuracy are generated by SAS. Furthermore, to know more about the tendency of customers' brand recall accuracy of the print ads, mean tables of page position, page number, brand size, picture size, brand fixation, pictorial fixation, and recall time are created. To analyze L'Oreal print ads performance compared with other brands, we introduced a dummy variable L'Oreal (1 for brand=L'Oreal; 0 for brand=other brands). A mean table of comparison of L'Oreal and other brands is produced to gain a better understanding of L'Oreal's advertising performance. Lastly, before building the models to estimate relevant factors, the correlation table is used to understand the relationship between variables. To understand how to improve L'Oreal's print ads visibility & memorability, several models are generated. A binary logit model, whose dependent variable denoted as 1 or 0 (yes/no), has been used to understand the factors affecting the customers' recall response. A Poisson model is used to recognize the factors that affect brand and pictorial fixation.

Key Findings

Overview of Dataset: 14.61% of participants were not attracted by the picture (Table2) and 47.21% of participants did not pay attention to the brand (Table3). 57.14% of ads demonstrate on the right-hand side (Table4). 51.43% of participants can recall the brand appropriately after being exposed to the ads. (Table5)

Customer's Recall Tendency on Ads: From the mean table grouped by recall accuracy (Table6), a clearer recall tendency from customers is uncovered. Print advertisements, toward the end of the right side magazine page, with bigger brand size, higher brand fixation, higher pictorial fixation, and shorter recall time, are easier for participants to remember their brand.

Comparison of L'Oreal and Others: L'Oreal ad was placed on page #5 on the right-hand side. (Table7). Compared to other brands, L'Oreal displays smaller brand size and picture size. Brand fixation and Pictorial fixation both last shorter. Customers did not remember L'Oreal print ads well.

Correlations between Variables: Given the result of the correlation (Table8), we found that brand fixation has a strong positive correlation with brand size, picture size, page number and page position. Pictorial fixation is positively correlated with picture size and page number.

Binary Logit Model: Includes recall accuracy as the dependent variable. Page position, page number, brand fixation, pictorial fixation, and L'Oreal serve as independent variables (Table9). To further understand the impact of

brand fixation and pictorial fixation, the interaction effect of brand fixation and pictorial fixation is also included. The result demonstrates that all variables are statistically significant. The equation is shown as below:

$$ɲ = a + b1(page\ num) + b2(page\ pos) + b3(brand\ fix) + ... b5(brand\ fix * pic\ fix) + b6(L'Oreal)$$

According to the result (Table9), to augment the odds of customer's brand recall accuracy, companies have to locate ads on the right side (page position=1) and near the end of the magazine. Increasing brand fixation and pictorial fixation would improve brand recall accuracy. However, the interaction effect of brand fixation and pictorial fixation would negatively affect the brand memory. To get the optimal result, the **unit** of brand fixation **increasing** should be more than pictorial fixation, since the coefficient of brand fixation is larger than the pictorial fixation.

Poisson Log Model: We further explored the variables that will affect the brand fixation and the pictorial fixation by using the Poisson Log Model (Table10). Based on the correlation result (Table8), brand size, picture size, page number, page position, L'Oreal are included. The interaction effect of brand size and picture size is also added to evaluate the attraction of ads. The surface size of the brand & pictorial elements, page position, and L'Oreal are statistically positively significant in impacting brand fixation, but **page number** has no significant effect. Furthermore, the interaction effect of brand size and picture size is statistically negatively related to brand fixation. Therefore, to achieve the optimal result, the **increase** of brand size should be more than picture size, since the coefficient of brand size is larger than picture size. After removing the page number, the Brand Fixation Poisson Log Model is presented below.

$$ɲ = a + b1(brand\ size) + b2(page\ pos) + ... + b4(brand\ size * pic\ size) + b5(L'Oreal)$$

In the Pictorial Fixation Poisson Log Model (Table11), the surface size of the pictorial element, page position, page number, and L'oreal are all statistically significant.

$$ɲ = a + b1(pic\ size) + b2(page\ pos) + b3(page\ num) + b4(L'Oreal)$$

From the two models, either brand size or picture size and page position are positively related to the fixation. It indicates that larger brand size and pictorial size and placing the ads in the right, increasing the fixation counts. Nevertheless, the interaction effect should be taken into account. To attract attention toward the brand, every unit increase in brand size should be more than the unit increase in picture size. Although page numbers show no impacts in the brand fixation model, the effect of page number in the picture fixation model is positive. Accordingly, we conclude that ads placed on the later pages of the magazine tend to attract more pictorial fixations.

Conclusions and Recommendations

1. It has been found out that increased brand and pictorial fixation impact the recall accuracy positively. So, for the increased fixation purpose (estimated by Poisson models), the surface size of both the brand and pictorial elements of print ads need to be increased. However, when both brand size and picture size are increased, the interaction effect negatively affects the brand fixation. Moreover, when the brand fixation and pictorial fixation increases, the interaction between the two also negatively affects the brand memory accuracy. Therefore, L'oreal should still consider purchasing broader dimensions (inches²) on magazine pages to place their ads, meanwhile ensuring to increase brand size by inches more than the pictorial size.
2. L'oreal also needs to position ads on the right side of the page; as the analysis shows (both Binary Logit and Poisson Log model), ads placed on the right side of pages have attracted more reader attention (for both brand & pictorial fixation) and generate better brand memory.
3. Although page number has no significant effect on brand fixation, it does positively affect pictorial fixation, indicating that image-heavy print ads can attract more attention if placed on the back of the magazine. Consequently, to increase the odds of brand recall accuracy, L'Oreal should locate ads near the end pages of the magazine.

Given that L'oreal incorporates these suggestions into their ads planning, the brand size is increased from **4.38** to **15** and pictorial size is increased from **52.59** to **55**. The data predict that L'Oreal's brand fixation will be **1.67** (Table12), which is around **200%** more than the previous fixation count of 0.559 (Table7), and pictorial fixation will be **3.34** (Table13), which is around **24%** more than previous fixation count of 2.69 (Table7). Therefore, the odds of recalling L'Oreal will be 71.54%, indicating the probability of customers recalling L'Oreal will be **41.71%**, which is higher than the probability of correctly recalling L'Oreal (**18.18%**) in the dataset (Table7).

Limitations:
1. Color-font combination and positioning (top/middle/bottom) of the brand and pictorial elements in the ad; these two factors might also affect brand attention and memory. Further research might consider these factors.
2. After measuring the brand memory, consumers' willingness to purchase is a crucial indicator to analyze the actual effectiveness and impact of the print ad on the psyche of the consumer. As making money is the final goal for all brands, it's also an interesting topic for future researchers to explore.

Appendices: Tables, Exhibits, Figures

- **Table 1: Frequency Table of Brand**

brand	Frequency	Percent	Cumulative Frequency	Cumulative Percent
AD.BRAND				
Alfa	88	2.86	88	2.86
Appelsientje	88	2.86	176	5.71
Arden	88	2.86	264	8.57
Armani	88	2.86	352	11.43
Astnor	88	2.86	440	14.29
Barclay	88	2.86	528	17.14
Cartoon	88	2.86	616	20.00
Chantelle	88	2.86	704	22.86
Citroen	88	2.86	792	25.71
ClearBlue	88	2.86	880	28.57
Conimex	88	2.86	968	31.43
Corona	88	2.86	1056	34.29
Daihatsu	88	2.86	1144	37.14
Dali	88	2.86	1232	40.00
Davidoff	88	2.86	1320	42.86
DelMonte	88	2.86	1408	45.71
Dior	88	2.86	1496	48.57
Fancy	88	2.86	1584	51.43
Gauloises	88	2.86	1672	54.29
Gilette	88	2.86	1760	57.14
Kapper	88	2.86	1848	60.00
Kodak	88	2.86	1936	62.86
LOreal	88	2.86	2024	65.71
Lancaster	88	2.86	2112	68.57
Lancome	88	2.86	2200	71.43
Legere	88	2.86	2288	74.29
Margriet	88	2.86	2376	77.14
MarieJo	88	2.86	2464	80.00
Nivea	88	2.86	2552	82.86
SiSi	88	2.86	2640	85.71
Silan	88	2.86	2728	88.57
Spa	88	2.86	2816	91.43
Stuyvesant	88	2.86	2904	94.29
VanderBilt	88	2.86	2992	97.14
Viva	88	2.86	3080	100.00

- **Table 2: Frequency Table of Pic_Fix**

	PICTORIAL.FIXATIONS			
pic_fix	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	450	14.61	450	14.61
1	335	10.88	785	25.49
2	353	11.46	1138	36.95
3	360	11.69	1498	48.64
4	294	9.55	1792	58.18
5	262	8.51	2054	66.69
6	174	5.65	2228	72.34
7	170	5.52	2398	77.86
8	140	4.55	2538	82.40
9	121	3.93	2659	86.33
10	85	2.76	2744	89.09
11	63	2.05	2807	91.14
12	51	1.66	2858	92.79
13	38	1.23	2896	94.03
14	38	1.23	2934	95.26
15	29	0.94	2963	96.20
16	20	0.65	2983	96.85
17	17	0.55	3000	97.40
18	17	0.55	3017	97.95
19	9	0.29	3026	98.25
20	10	0.32	3036	98.57
21	6	0.19	3042	98.77
22	9	0.29	3051	99.06
23	5	0.16	3056	99.22
24	2	0.06	3058	99.29
25	5	0.16	3063	99.45
26	2	0.06	3065	99.51
27	1	0.03	3066	99.55
28	1	0.03	3067	99.58
29	2	0.06	3069	99.64
30	2	0.06	3071	99.71
31	1	0.03	3072	99.74
32	2	0.06	3074	99.81
34	3	0.10	3077	99.90
40	1	0.03	3078	99.94
46	1	0.03	3079	99.97
59	1	0.03	3080	100.00

- **Table 3: Frequency Table of Brand_Fixation**

The FREQ Procedure

BRAND.FIXATIONS				
brand_fix	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1454	47.21	1454	47.21
1	517	16.79	1971	63.99
2	368	11.95	2339	75.94
3	225	7.31	2564	83.25
4	167	5.42	2731	88.67
5	106	3.44	2837	92.11
6	71	2.31	2908	94.42
7	44	1.43	2952	95.84
8	37	1.20	2989	97.05
9	23	0.75	3012	97.79
10	21	0.68	3033	98.47
11	12	0.39	3045	98.86
12	5	0.16	3050	99.03
13	7	0.23	3057	99.25
14	4	0.13	3061	99.38
15	3	0.10	3064	99.48
16	5	0.16	3069	99.64
18	2	0.06	3071	99.71
19	1	0.03	3072	99.74
20	2	0.06	3074	99.81
21	2	0.06	3076	99.87
22	1	0.03	3077	99.90
24	1	0.03	3078	99.94
26	1	0.03	3079	99.97
32	1	0.03	3080	100.00

- **Table 4: Frequency Table of Page Position**

LEFT.RIGHT.LOCATION				
page_pos	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1320	42.86	1320	42.86
1	1760	57.14	3080	100.00

- **Table 5: Frequency Table of Brand Recall Accuracy**

BRAND.RECALL				
recall_accu	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1496	48.57	1496	48.57
1	1584	51.43	3080	100.00

- **Table 6: Mean Table of Brand Recall Accuracy**

The MEANS Procedure

BRAND.RECALL	N Obs	Variable	Label	N	Mean	Std Dev	Minimum	Maximum
0	1496	page_pos	LEFT.RIGHT.LOCATION	1496	0.5354278	0.4989101	0	1.0000000
		page_num	PAGE.NUMBER	1496	48.8950535	39.7577827	2.0000000	127.0000000
		brand_size	BRAND.SURFACE	1496	6.2032254	4.8967081	1.8150500	25.1658000
		pic_size	PICTORIAL.SURFACE	1496	67.9642446	13.6935829	24.0219000	88.0896000
		brand_fix	BRAND.FIXATIONS	1496	1.3141711	2.2239709	0	22.0000000
		pic_fix	PICTORIAL.FIXATIONS	1496	4.3723262	4.8401619	0	59.0000000
		RECALL_TIME	RECALL.TIME	1496	2.5589572	1.0515591	0.0400000	5.4400000
1	1584	page_pos	LEFT.RIGHT.LOCATION	1584	0.6054293	0.4889126	0	1.0000000
		page_num	PAGE.NUMBER	1584	64.2657828	40.0142987	2.0000000	127.0000000
		brand_size	BRAND.SURFACE	1584	7.5209983	6.2978666	1.8150500	25.1658000
		pic_size	PICTORIAL.SURFACE	1584	67.0875051	13.1262266	24.0219000	88.0896000
		brand_fix	BRAND.FIXATIONS	1584	2.0909091	3.0804038	0	32.0000000
		pic_fix	PICTORIAL.FIXATIONS	1584	5.4229798	5.0259342	0	46.0000000
		RECALL_TIME	RECALL.TIME	1584	2.2720455	0.9469776	0.0400000	5.0400000

● **Table 7: Mean Table of Loreal and Other Brands**

The MEANS Procedure

loreal	N Obs	Variable	Label	N	Mean	Std Dev	Minimum	Maximum
0	2992	page_pos	LEFT.RIGHT.LOCATION	2992	0.5588235	0.4966107	0	1.0000000
		page_num	PAGE.NUMBER	2992	58.3235294	40.2118713	2.0000000	127.0000000
		brand_size	BRAND.SURFACE	2992	6.9544397	5.7649180	1.8150500	25.1658000
		pic_size	PICTORIAL.SURFACE	2992	67.9523647	13.3553334	24.0219000	88.0896000
		brand_fix	BRAND.FIXATIONS	2992	1.7476604	2.7527369	0	32.0000000
		pic_fix	PICTORIAL.FIXATIONS	2992	4.9779412	4.9995167	0	59.0000000
		recall_accu	BRAND.RECALL	2992	0.5240642	0.4995041	0	1.0000000
1	88	page_pos	LEFT.RIGHT.LOCATION	88	1.0000000	0	1.0000000	1.0000000
		page_num	PAGE.NUMBER	88	5.0000000	0	5.0000000	5.0000000
		brand_size	BRAND.SURFACE	88	4.3818500	0	4.3818500	4.3818500
		pic_size	PICTORIAL.SURFACE	88	52.5868500	0	52.5868500	52.5868500
		brand_fix	BRAND.FIXATIONS	88	0.5568182	1.0378797	0	5.0000000
		pic_fix	PICTORIAL.FIXATIONS	88	2.6931818	2.7390658	0	15.0000000
		recall_accu	BRAND.RECALL	88	0.1818182	0.3879049	0	1.0000000

● **Table 8: Correlations between Variables**

Pearson Correlation Coefficients, N = 3080 Prob > |r| under H0: Rho=0							
	brand_fix	pic_fix	brand_size	pic_size	page_num	page_pos	RECALL_TIME
brand_fix BRAND.FIXATIONS	1.00000	0.30909 <.0001	0.35204 <.0001	0.05317 0.0032	0.05052 0.0050	0.20533 <.0001	0.00573 0.7508
pic_fix PICTORIAL.FIXATIONS	0.30909 <.0001	1.00000	-0.05076 0.0048	0.19879 <.0001	0.06624 0.0002	0.02838 0.1153	-0.01785 0.3219
brand_size BRAND.SURFACE	0.35204 <.0001	-0.05076 0.0048	1.00000	0.07060 <.0001	0.05345 0.0030	0.15371 <.0001	0.04062 0.0242
pic_size PICTORIAL.SURFACE	0.05317 0.0032	0.19879 <.0001	0.07060 <.0001	1.00000	-0.06478 0.0003	-0.07561 <.0001	0.04579 0.0110
page_num PAGE.NUMBER	0.05052 0.0050	0.06624 0.0002	0.05345 0.0030	-0.06478 0.0003	1.00000	0.08246 <.0001	-0.12164 <.0001
page_pos LEFT.RIGHT.LOCATION	0.20533 <.0001	0.02838 0.1153	0.15371 <.0001	-0.07561 <.0001	0.08246 <.0001	1.00000	-0.01916 0.2878
RECALL_TIME RECALL.TIME	0.00573 0.7508	-0.01785 0.3219	0.04062 0.0242	0.04579 0.0110	-0.12164 <.0001	-0.01916 0.2878	1.00000

● **Table 9: Binary Logit Model**

```
proc genmod data=temp descending;
    model recall_accu=page_pos page_num  brand_fix pic_fix brand_fix*pic_fix loreal/
        dist=binomial link=logit;
    title 'Binary Logit Model for Recall Accuracy = 1';
run;
```

Analysis Of Maximum Likelihood Parameter Estimates							
Parameter	DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept	1	-0.8386	0.0886	-1.0122	-0.6649	89.57	<.0001
page_pos	1	0.1754	0.0780	0.0225	0.3283	5.05	0.0246
page_num	1	0.0085	0.0010	0.0066	0.0103	78.45	<.0001
brand_fix	1	0.1394	0.0234	0.0936	0.1852	35.58	<.0001
pic_fix	1	0.0407	0.0095	0.0220	0.0593	18.22	<.0001
brand_fix*pic_fix	1	-0.0072	0.0022	-0.0114	-0.0030	11.20	0.0008
loreal	1	-1.0604	0.2880	-1.6249	-0.4959	13.56	0.0002
Scale	0	1.0000	0.0000	1.0000	1.0000		

- **Table 10: Possession Regression-Brand_Fix (Brand Fixation)**

```
proc genmod data=temp;
    model brand_fix=brand_size pic_size page_pos page_num brand_size*pic_size loreal/
        dist=poisson link=log;
    title 'M25:Poission Regression for brand fixation count';
```

Analysis Of Maximum Likelihood Parameter Estimates							
Parameter	DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.6839	0.1489	-1.9758	-1.3920	127.85	<.0001
brand_size	1	0.1989	0.0141	0.1712	0.2266	198.25	<.0001
pic_size	1	0.0182	0.0020	0.0142	0.0222	80.73	<.0001
page_pos	1	0.5800	0.0326	0.5161	0.6440	316.10	<.0001
page_num	1	0.0002	0.0003	-0.0005	0.0009	0.29	0.5880
brand_size*pic_size	1	-0.0018	0.0002	-0.0022	-0.0015	92.28	<.0001
loreal	1	-0.8881	0.1478	-1.1778	-0.5984	36.11	<.0001
Scale	0	1.0000	0.0000	1.0000	1.0000		

Note: The scale parameter was held fixed.

```
proc genmod data=temp;
    model brand_fix=brand_size page_pos pic_size brand_size*pic_size loreal/
        dist=poisson link=log;
    title 'M24:Poission Regression for brand fixation count';                    /
```

Analysis Of Maximum Likelihood Parameter Estimates							
Parameter	DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.6759	0.1484	-1.9667	-1.3852	127.62	<.0001
brand_size	1	0.1992	0.0141	0.1715	0.2269	198.96	<.0001
page_pos	1	0.5823	0.0324	0.5189	0.6457	323.73	<.0001
pic_size	1	0.0182	0.0020	0.0143	0.0222	80.79	<.0001
brand_size*pic_size	1	-0.0018	0.0002	-0.0022	-0.0015	92.76	<.0001
loreal	1	-0.8988	0.1465	-1.1859	-0.6118	37.67	<.0001
Scale	0	1.0000	0.0000	1.0000	1.0000		

Note: The scale parameter was held fixed.

- **Table 11:Possession Regression-Pic_Fix (Pictorial Fixation)**

Analysis Of Maximum Likelihood Parameter Estimates							
Parameter	DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept	1	0.2424	0.0556	0.1334	0.3514	18.99	<.0001
pic_size	1	0.0175	0.0007	0.0161	0.0190	575.41	<.0001
page_pos	1	0.1068	0.0169	0.0736	0.1399	39.81	<.0001
page_num	1	0.0015	0.0002	0.0011	0.0019	53.45	<.0001
loreal	1	-0.2873	0.0681	-0.4208	-0.1538	17.79	<.0001
Scale	0	1.0000	0.0000	1.0000	1.0000		

- **Table 12: Brand Fixation Prediction**

Results for the Poisson Regression of Brand Fixations

Analysis Of Maximum Likelihood Parameter Estimates									
Parameter		DF	Estimate	EXP(B)	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	t-Value	Pr > ChiSq
Intercept		1	-1.6759	0.1871	0.1484	-1.9667	-1.3852	127.62	11.30	<.0001
Brand_size		1	0.1992	1.2204	0.0141	0.1715	0.2269	198.96	14.11	<.0001
Page_pos	RIGHT	1	0.5823	1.7902	0.0324	0.5189	0.6457	323.73	17.99	<.0001
Pic_size		1	0.0182	1.0184	0.002	0.0143	0.0222	80.79	8.99	<.0001
Brand_size*Pic_size		1	-0.0018	0.9982	0.0002	-0.0022	-0.0015	92.76	9.63	<.0001
L'Oreal		1	-0.8988	0.4071	0.1465	-1.1859	-0.6118	37.67	6.14	<.0001

X-VALUES	X*b	Comments
1	-1.6759	Intercept is always 1!
15	2.9880	Surface Ranges from 1.8-25.2 Inch^2
1	0.5823	Left=0, Set to 1 for right
55	1.0010	Surface Ranges from 24-88 Inch^2
825	-1.4850	
1	-0.8988	L'Oreal is always 1!
	0.5116	
Predicted Value	1.6680	exp(linear predictor)=Predicted number of Fixations

- **Table 13: Pictorial Fixation Prediction**

Results for the Poisson Regression of Pictorial Fixations

ESTIMATES

Analysis Of Maximum Likelihood Parameter Estimates									
Parameter		DF	Estimate	EXP(B)	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	t-Value	Pr > ChiSq
Intercept		1	0.2424	1.2743038	0.556	0.1334	0.3514	18.99	4.358	<.0001
pice_size		1	0.0175	1.017654	0.0007	0.0161	0.019	575.41	23.988	<.0001
page_pos	RIGHT	1	0.1068	1.1127117	0.0169	0.0736	0.1399	39.81	6.310	<.0001
L'Oreal		1	-0.2873	0.7503	0.0681	-0.4298	-0.1538	17.79	4.218	<.0001
page_num		1	0.0015	1.0015011	0.0002	0.0011	0.0019	53.45	7.311	<.0001

X-VALUES	X*b	Comments
1	0.2424	Intercept is always 1!
55	0.9625	Surface Ranges from 24-88 Inch^2
1	0.1068	Left=0, Set to 1 for right
1	-0.2873	L'Oreal is always 1!
120	0.18	Page number ranges from 2-127
	1.2044	Linear Predictor
Predicted Value	3.3348	exp(linear predictor)=Predicted number of Fixations

- **Table 14: Brand Recall Accuracy Prediction**

Results for the Binomial Logit Regression of Memory

		DF	Estimate	Exp(b)	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	t-Value	Pr > ChiSq
Analysis Of Maximum Likelihood Parameter Estimates										
Parameter		DF	Estimate	Exp(b)	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	t-Value	Pr > ChiSq
Intercept		1	-0.8386	0.432315	0.0888	-1.0122	-0.6649	89.57	9.46	<.0001
Brand_fix		1	0.1394	1.149584	0.0234	0.0936	0.1852	35.58	5.96	<.0001
Pic_fix		1	0.0407	1.04154	0.0095	0.022	0.0593	18.22	4.27	<.0001
Page_pos	RIGHT	1	0.1754	1.191723	0.078	0.0225	0.3283	5.05	2.25	0.0246
Page_num		1	0.0085	1.008536	0.001	0.0066	0.0103	78.45	8.86	<.0001
Brand_fix* Pic_fix		1	-0.0072	0.992826	0.0022	-0.0114	-0.003	112	10.58	0.0008
L'Oreal		1	-1.0604	0.346317	0.288	-1.6249	-0.4959	13.56	3.68	0.0002

PREDICTIONS

X-VALUES	X*b	Comments
1	-0.8386	Intercept is always 1!
1.67	0.2328	Brand Fixations Range from 0-32 in the Data
3.34	0.1359	Pictorial Fixations Range from 0-59 in the Data
1	0.1754	Left=0, Set to 1 for right
120	1.0200	Page number ranges from 2-127
5.5778		
1	-1.0604	L'Oreal is always 1!
	-0.3349	Linear Predictor
	0.7154	exp(linear predictor)
Predicted Value	0.4171	Predicted Probability