The LOGISTIC Procedure

Model Information	
Data Set	WORK.KOBE
Response Variable	shot_made_flag
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	25697
Number of Observations Used	25697

Response Profile		
Ordered Value	**shot_made_flag**	**Total Frequency**
1	0	14232
2	1	11465

Probability modeled is shot_made_flag='0'.

Forward Selection Procedure

The LOGISTIC Procedure

Class Level Information																										
Class	**Value**	**Design Variables**																								
action_type	**Alley Oop Dunk Sh**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Alley Oop Layup s	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cutting Layup Sho	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Bank shot	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Dunk Shot	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Finger Ro	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Floating	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Hook Shot	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Jump shot	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Layup Sho	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Reverse L	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Driving Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Fadeaway Bank sho	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	Fadeaway Jump Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Finger Roll Layup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	Finger Roll Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	Floating Jump sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Follow Up Dunk Sh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	Hook Bank Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	Hook Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	Jump Bank Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	Jump Hook Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	Jump Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	Layup Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

The LOGISTIC Procedure

Class Level Information																									
Design Variables																									
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The LOGISTIC Procedure

Class Level Information																										
Class	Value	Design Variables																								
	Pullup Bank shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pullup Jump shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Putback Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Putback Layup Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Putback Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reverse Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reverse Layup Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reverse Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Bank shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Finger Ro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Hook Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Jump Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Layup Sho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Pull-Up J	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Reverse L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Slam Dunk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Running Tip Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Slam Dunk Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Step Back Jump sh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tip Layup Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tip Shot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Bank s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Fadeaw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The LOGISTIC Procedure

Class Level Information																									
Design Variables																									
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

The LOGISTIC Procedure

Class Level Information																											
Class	**Value**	**Design Variables**																									
	Turnaround Finger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Hook S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Turnaround Jump S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
combined_shot_type	**Bank Shot**	1	0	0	0	0																					
	Dunk	0	1	0	0	0																					
	Hook Shot	0	0	1	0	0																					
	Jump Shot	0	0	0	1	0																					
	Layup	0	0	0	0	1																					
	Tip Shot	-1	-1	-1	-1	-1																					
period	**1**	1	0	0	0	0	0																				
	2	0	1	0	0	0	0																				
	3	0	0	1	0	0	0																				
	4	0	0	0	1	0	0																				
	5	0	0	0	0	1	0																				
	6	0	0	0	0	0	1																				
	7	-1	-1	-1	-1	-1	-1																				
playoffs	**0**	1																									
	1	-1																									
shot_type	**2PT Field Goal**	1																									
	3PT Field Goal	-1																									
shot_zone_area	**Back Court(BC)**	1	0	0	0	0																					
	Center(C)	0	1	0	0	0																					
	Left Side Center(LC)	0	0	1	0	0																					
	Left Side(L)	0	0	0	1	0																					
	Right Side Center(RC)	0	0	0	0	1																					
	Right Side(R)	-1	-1	-1	-1	-1																					
shot_zone_basic	**Above the Break 3**	1	0	0	0	0	0																				
	Backcourt	0	1	0	0	0	0																				
	In The Paint (Non-RA)	0	0	1	0	0	0																				

The LOGISTIC Procedure

Class Level Information																									
Design Variables																									
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

The LOGISTIC Procedure

Class Level Information																										
Class	**Value**	**Design Variables**																								
	Left Corner 3	0	0	0	1	0	0																			
	Mid-Range	0	0	0	0	1	0																			
	Restricted Area	0	0	0	0	0	1																			
	Right Corner 3	-1	-1	-1	-1	-1	-1																			
shot_zone_range	**16-24 ft.**	1	0	0	0																					
	24+ ft.	0	1	0	0																					
	8-16 ft.	0	0	1	0																					
	Back Court Shot	0	0	0	1																					
	Less Than 8 ft.	-1	-1	-1	-1																					

The LOGISTIC Procedure

Class Level Information
Design Variables

Step 0. Intercept entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

-2 Log L	=	35325.083

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	0.2162	0.0125	296.7871	<.0001

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
4033.6304	79	<.0001

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
action_type	51	3641.0049	<.0001
combined_shot_type	5	1561.7294	<.0001
period	6	37.8213	<.0001
minutes_remaining	1	20.6413	<.0001
playoffs	1	0.0406	0.8403
seconds_remaining	1	24.3835	<.0001

The LOGISTIC Procedure

Analysis of Effects Eligible for Entry			
Effect	**DF**	**Score Chi-Square**	**Pr > ChiSq**
shot_distance	1	1009.8871	<.0001
shot_type	1	379.1099	<.0001
shot_zone_area	5	567.6291	<.0001
shot_zone_basic	6	1104.5594	<.0001
shot_zone_range	4	900.6613	<.0001
game_date	1	9.1925	0.0024
attendance	1	239.9584	<.0001
arena_temp	1	45.0689	<.0001
avgnoisedb	1	74.5570	<.0001

Step 1. Effect action_type entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	35327.083	31527.962
SC	35335.237	31951.976
-2 Log L	35325.083	31423.962

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	3901.1213	51	<.0001
Score	3641.0049	51	<.0001
Wald	2714.8310	51	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2714.8310	<.0001

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-1.5806	14.4216	0.0120	0.9127
action_type	Alley Oop Dunk Sh	1	-1.3097	14.4286	0.0082	0.9277
action_type	Alley Oop Layup s	1	0.6539	14.4240	0.0021	0.9638
action_type	Cutting Layup Sho	1	0.8875	14.4466	0.0038	0.9510
action_type	Driving Bank shot	1	0.8875	14.4715	0.0038	0.9511
action_type	Driving Dunk Shot	1	-2.1531	14.4273	0.0223	0.8814
action_type	Driving Finger Ro	1	-0.2866	14.4239	0.0004	0.9841
action_type	Driving Floating	1	1.5806	14.4549	0.0120	0.9129
action_type	Driving Hook Shot	1	1.1106	14.4324	0.0059	0.9387
action_type	Driving Jump shot	1	1.8430	14.4275	0.0163	0.8984
action_type	Driving Layup Sho	1	0.5274	14.4217	0.0013	0.9708
action_type	Driving Reverse L	1	0.4980	14.4237	0.0012	0.9725
action_type	Driving Slam Dunk	1	-2.1570	14.4557	0.0223	0.8814
action_type	Dunk Shot	1	0.3219	14.4225	0.0005	0.9822
action_type	Fadeaway Bank sho	1	-0.4988	14.4341	0.0012	0.9724
action_type	Fadeaway Jump Sho	1	1.2802	14.4218	0.0079	0.9293
action_type	Finger Roll Layup	1	0.0546	14.4297	0.0000	0.9970
action_type	Finger Roll Shot	1	1.7348	14.4268	0.0145	0.9043
action_type	Floating Jump sho	1	0.6340	14.4234	0.0019	0.9649
action_type	Follow Up Dunk Sh	1	-0.6166	14.4586	0.0018	0.9660
action_type	Hook Bank Shot	1	-10.6426	198.3	0.0029	0.9572
action_type	Hook Shot	1	2.1134	14.4236	0.0215	0.8835
action_type	Jump Bank Shot	1	0.3434	14.4223	0.0006	0.9810
action_type	Jump Hook Shot	1	0.5510	14.4306	0.0015	0.9695
action_type	Jump Shot	1	2.3028	14.4216	0.0255	0.8731
action_type	Layup Shot	1	2.0476	14.4217	0.0202	0.8871
action_type	Pullup Bank shot	1	1.3983	14.4338	0.0094	0.9228
action_type	Pullup Jump shot	1	0.6168	14.4220	0.0018	0.9659
action_type	Putback Dunk Shot	1	0.8875	14.4715	0.0038	0.9511
action_type	Putback Layup Sho	1	0.8875	14.4383	0.0038	0.9510
action_type	Putback Slam Dunk	1	1.5806	14.4881	0.0119	0.9131
action_type	Reverse Dunk Shot	1	-0.8353	14.4289	0.0034	0.9538
action_type	Reverse Layup Sho	1	1.0198	14.4220	0.0050	0.9436
action_type	Reverse Slam Dunk	1	-10.6426	115.1	0.0085	0.9263
action_type	Running Bank shot	1	-0.0570	14.4273	0.0000	0.9968

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Running Dunk Shot	1	-0.4988	14.4403	0.0012	0.9724
action_type	Running Finger Ro	1	1.8038	14.4366	0.0156	0.9006
action_type	Running Hook Shot	1	-0.4004	14.4311	0.0008	0.9779
action_type	Running Jump Shot	1	0.4974	14.4218	0.0012	0.9725
action_type	Running Layup Sho	1	0.7052	14.4247	0.0024	0.9610
action_type	Running Pull-Up J	1	0.8875	14.4715	0.0038	0.9511
action_type	Running Reverse L	1	1.2929	14.4410	0.0080	0.9287
action_type	Running Slam Dunk	1	-10.6426	442.5	0.0006	0.9808
action_type	Running Tip Shot	1	13.8011	441.9	0.0010	0.9751
action_type	Slam Dunk Shot	1	-2.4206	14.4273	0.0282	0.8668
action_type	Step Back Jump sh	1	1.0395	14.4230	0.0052	0.9425
action_type	Tip Layup Shot	1	1.5806	14.4881	0.0119	0.9131
action_type	Tip Shot	1	2.1953	14.4226	0.0232	0.8790
action_type	Turnaround Bank s	1	0.2369	14.4251	0.0003	0.9869
action_type	Turnaround Fadeaw	1	1.2385	14.4220	0.0074	0.9316
action_type	Turnaround Finger	1	-10.6426	313.1	0.0012	0.9729
action_type	Turnaround Hook S	1	1.5806	14.4383	0.0120	0.9128

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Alley Oop Dunk Sh vs Turnaround Jump S	0.083	0.033	0.206
action_type Alley Oop Layup s vs Turnaround Jump S	0.589	0.341	1.019
action_type Cutting Layup Sho vs Turnaround Jump S	0.744	0.136	4.086
action_type Driving Bank shot vs Turnaround Jump S	0.744	0.067	8.240
action_type Driving Dunk Shot vs Turnaround Jump S	0.036	0.016	0.081
action_type Driving Finger Ro vs Turnaround Jump S	0.230	0.136	0.390
action_type Driving Floating vs Turnaround Jump S	1.489	0.209	10.618
action_type Driving Hook Shot vs Turnaround Jump S	0.931	0.302	2.867
action_type Driving Jump shot vs Turnaround Jump S	1.935	0.840	4.462
action_type Driving Layup Sho vs Turnaround Jump S	0.519	0.436	0.618
action_type Driving Reverse L vs Turnaround Jump S	0.504	0.302	0.842
action_type Driving Slam Dunk vs Turnaround Jump S	0.035	0.005	0.259
action_type Dunk Shot vs Turnaround Jump S	0.423	0.299	0.599
action_type Fadeaway Bank sho vs Turnaround Jump S	0.186	0.056	0.623
action_type Fadeaway Jump Sho vs Turnaround Jump S	1.103	0.912	1.333

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Finger Roll Layup vs Turnaround Jump S	0.324	0.122	0.859
action_type Finger Roll Shot vs Turnaround Jump S	1.737	0.794	3.799
action_type Floating Jump sho vs Turnaround Jump S	0.578	0.360	0.926
action_type Follow Up Dunk Sh vs Turnaround Jump S	0.165	0.021	1.311
action_type Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Hook Shot vs Turnaround Jump S	2.537	1.548	4.156
action_type Jump Bank Shot vs Turnaround Jump S	0.432	0.318	0.587
action_type Jump Hook Shot vs Turnaround Jump S	0.532	0.190	1.489
action_type Jump Shot vs Turnaround Jump S	3.065	2.670	3.519
action_type Layup Shot vs Turnaround Jump S	2.375	2.025	2.786
action_type Pullup Bank shot vs Turnaround Jump S	1.241	0.376	4.096
action_type Pullup Jump shot vs Turnaround Jump S	0.568	0.439	0.734
action_type Putback Dunk Shot vs Turnaround Jump S	0.744	0.067	8.240
action_type Putback Layup Sho vs Turnaround Jump S	0.744	0.185	2.996
action_type Putback Slam Dunk vs Turnaround Jump S	1.489	0.093	23.880
action_type Reverse Dunk Shot vs Turnaround Jump S	0.133	0.053	0.335
action_type Reverse Layup Sho vs Turnaround Jump S	0.850	0.655	1.103
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.289	0.127	0.658
action_type Running Dunk Shot vs Turnaround Jump S	0.186	0.043	0.814
action_type Running Finger Ro vs Turnaround Jump S	1.861	0.496	6.978
action_type Running Hook Shot vs Turnaround Jump S	0.205	0.072	0.589
action_type Running Jump Shot vs Turnaround Jump S	0.504	0.409	0.622
action_type Running Layup Sho vs Turnaround Jump S	0.620	0.335	1.150
action_type Running Pull-Up J vs Turnaround Jump S	0.744	0.067	8.240
action_type Running Reverse L vs Turnaround Jump S	1.117	0.248	5.019
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.027	0.012	0.062
action_type Step Back Jump sh vs Turnaround Jump S	0.867	0.571	1.315
action_type Tip Layup Shot vs Turnaround Jump S	1.489	0.093	23.880
action_type Tip Shot vs Turnaround Jump S	2.753	1.921	3.946
action_type Turnaround Bank s vs Turnaround Jump S	0.388	0.203	0.743
action_type Turnaround Fadeaw vs Turnaround Jump S	1.057	0.826	1.354

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.489	0.370	5.992

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	50.2	Somers' D	0.356
Percent Discordant	14.6	Gamma	0.550
Percent Tied	35.2	Tau-a	0.176
Pairs	163169880	c	0.678

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
452.1562	28	<.0001

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
combined_shot_type	0	.	.
period	6	24.2856	0.0005
minutes_remaining	1	22.1232	<.0001
playoffs	1	0.0016	0.9686
seconds_remaining	1	23.3586	<.0001
shot_distance	1	0.7036	0.4016
shot_type	1	2.7638	0.0964
shot_zone_area	5	64.9051	<.0001
shot_zone_basic	6	39.6916	<.0001
shot_zone_range	4	86.2399	<.0001
game_date	1	19.9416	<.0001
attendance	1	213.2263	<.0001
arena_temp	1	38.7014	<.0001
avgnoisedb	1	60.5631	<.0001

Step 2. Effect attendance entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

The LOGISTIC Procedure

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	35327.083	31316.054
SC	35335.237	31748.223
-2 Log L	35325.083	31210.054

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	4115.0291	52	<.0001
Score	3824.0600	52	<.0001
Wald	2860.8944	52	<.0001

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
action_type	51	2706.5744	<.0001
attendance	1	211.3279	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	1.2130	14.4180	0.0071	0.9330
action_type	Alley Oop Dunk Sh	1	-1.3365	14.4238	0.0086	0.9262
action_type	Alley Oop Layup s	1	0.6928	14.4192	0.0023	0.9617
action_type	Cutting Layup Sho	1	0.7570	14.4418	0.0027	0.9582
action_type	Driving Bank shot	1	0.8500	14.4673	0.0035	0.9531
action_type	Driving Dunk Shot	1	-2.1450	14.4224	0.0221	0.8818
action_type	Driving Finger Ro	1	-0.2838	14.4190	0.0004	0.9843
action_type	Driving Floating	1	1.4870	14.4503	0.0106	0.9180
action_type	Driving Hook Shot	1	1.1103	14.4277	0.0059	0.9387
action_type	Driving Jump shot	1	1.8990	14.4227	0.0173	0.8952
action_type	Driving Layup Sho	1	0.5248	14.4168	0.0013	0.9710
action_type	Driving Reverse L	1	0.4539	14.4189	0.0010	0.9749
action_type	Driving Slam Dunk	1	-2.1533	14.4508	0.0222	0.8815
action_type	Dunk Shot	1	0.3306	14.4176	0.0005	0.9817
action_type	Fadeaway Bank sho	1	-0.5072	14.4293	0.0012	0.9720
action_type	Fadeaway Jump Sho	1	1.2574	14.4169	0.0076	0.9305

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Finger Roll Layup	1	0.00830	14.4249	0.0000	0.9995
action_type	Finger Roll Shot	1	1.7091	14.4219	0.0140	0.9057
action_type	Floating Jump sho	1	0.6415	14.4185	0.0020	0.9645
action_type	Follow Up Dunk Sh	1	-0.7151	14.4538	0.0024	0.9605
action_type	Hook Bank Shot	1	-10.5956	197.7	0.0029	0.9573
action_type	Hook Shot	1	2.1261	14.4187	0.0217	0.8828
action_type	Jump Bank Shot	1	0.3303	14.4174	0.0005	0.9817
action_type	Jump Hook Shot	1	0.5619	14.4258	0.0015	0.9689
action_type	Jump Shot	1	2.3014	14.4167	0.0255	0.8732
action_type	Layup Shot	1	2.0384	14.4168	0.0200	0.8876
action_type	Pullup Bank shot	1	1.3951	14.4291	0.0093	0.9230
action_type	Pullup Jump shot	1	0.5922	14.4171	0.0017	0.9672
action_type	Putback Dunk Shot	1	0.9712	14.4677	0.0045	0.9465
action_type	Putback Layup Sho	1	0.7690	14.4335	0.0028	0.9575
action_type	Putback Slam Dunk	1	1.5407	14.4833	0.0113	0.9153
action_type	Reverse Dunk Shot	1	-0.8132	14.4240	0.0032	0.9550
action_type	Reverse Layup Sho	1	1.0180	14.4172	0.0050	0.9437
action_type	Reverse Slam Dunk	1	-10.6261	114.7	0.0086	0.9262
action_type	Running Bank shot	1	-0.0809	14.4224	0.0000	0.9955
action_type	Running Dunk Shot	1	-0.4988	14.4355	0.0012	0.9724
action_type	Running Finger Ro	1	1.7753	14.4318	0.0151	0.9021
action_type	Running Hook Shot	1	-0.3651	14.4262	0.0006	0.9798
action_type	Running Jump Shot	1	0.4945	14.4169	0.0012	0.9726
action_type	Running Layup Sho	1	0.7092	14.4199	0.0024	0.9608
action_type	Running Pull-Up J	1	0.8064	14.4671	0.0031	0.9556
action_type	Running Reverse L	1	1.4007	14.4363	0.0094	0.9227
action_type	Running Slam Dunk	1	-10.3333	442.5	0.0005	0.9814
action_type	Running Tip Shot	1	13.7387	441.9	0.0010	0.9752
action_type	Slam Dunk Shot	1	-2.4058	14.4224	0.0278	0.8675
action_type	Step Back Jump sh	1	1.0491	14.4181	0.0053	0.9420
action_type	Tip Layup Shot	1	1.6015	14.4835	0.0122	0.9120
action_type	Tip Shot	1	2.2090	14.4177	0.0235	0.8782
action_type	Turnaround Bank s	1	0.2024	14.4202	0.0002	0.9888
action_type	Turnaround Fadeaw	1	1.2163	14.4171	0.0071	0.9328
action_type	Turnaround Finger	1	-10.4599	313.0	0.0011	0.9733

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Turnaround Hook S	1	1.5703	14.4335	0.0118	0.9134
attendance		1	-0.00019	0.000013	211.3279	<.0001

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Alley Oop Dunk Sh vs Turnaround Jump S	0.081	0.032	0.201
action_type Alley Oop Layup s vs Turnaround Jump S	0.614	0.354	1.064
action_type Cutting Layup Sho vs Turnaround Jump S	0.655	0.119	3.605
action_type Driving Bank shot vs Turnaround Jump S	0.719	0.064	8.089
action_type Driving Dunk Shot vs Turnaround Jump S	0.036	0.016	0.082
action_type Driving Finger Ro vs Turnaround Jump S	0.231	0.136	0.393
action_type Driving Floating vs Turnaround Jump S	1.359	0.189	9.784
action_type Driving Hook Shot vs Turnaround Jump S	0.932	0.301	2.891
action_type Driving Jump shot vs Turnaround Jump S	2.052	0.887	4.749
action_type Driving Layup Sho vs Turnaround Jump S	0.519	0.436	0.618
action_type Driving Reverse L vs Turnaround Jump S	0.484	0.289	0.809
action_type Driving Slam Dunk vs Turnaround Jump S	0.036	0.005	0.261
action_type Dunk Shot vs Turnaround Jump S	0.428	0.302	0.606
action_type Fadeaway Bank sho vs Turnaround Jump S	0.185	0.055	0.621
action_type Fadeaway Jump Sho vs Turnaround Jump S	1.080	0.893	1.307
action_type Finger Roll Layup vs Turnaround Jump S	0.310	0.116	0.825
action_type Finger Roll Shot vs Turnaround Jump S	1.697	0.774	3.722
action_type Floating Jump sho vs Turnaround Jump S	0.583	0.363	0.937
action_type Follow Up Dunk Sh vs Turnaround Jump S	0.150	0.019	1.194
action_type Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Hook Shot vs Turnaround Jump S	2.575	1.569	4.227
action_type Jump Bank Shot vs Turnaround Jump S	0.427	0.314	0.582
action_type Jump Hook Shot vs Turnaround Jump S	0.539	0.192	1.512
action_type Jump Shot vs Turnaround Jump S	3.068	2.671	3.525
action_type Layup Shot vs Turnaround Jump S	2.359	2.009	2.769
action_type Pullup Bank shot vs Turnaround Jump S	1.240	0.373	4.125
action_type Pullup Jump shot vs Turnaround Jump S	0.555	0.429	0.718
action_type Putback Dunk Shot vs Turnaround Jump S	0.811	0.072	9.203
action_type Putback Layup Sho vs Turnaround Jump S	0.663	0.164	2.677
action_type Putback Slam Dunk vs Turnaround Jump S	1.434	0.089	22.998

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Reverse Dunk Shot vs Turnaround Jump S	0.136	0.054	0.344
action_type Reverse Layup Sho vs Turnaround Jump S	0.850	0.655	1.104
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.283	0.124	0.645
action_type Running Dunk Shot vs Turnaround Jump S	0.187	0.043	0.818
action_type Running Finger Ro vs Turnaround Jump S	1.813	0.481	6.832
action_type Running Hook Shot vs Turnaround Jump S	0.213	0.074	0.613
action_type Running Jump Shot vs Turnaround Jump S	0.504	0.408	0.622
action_type Running Layup Sho vs Turnaround Jump S	0.624	0.336	1.160
action_type Running Pull-Up J vs Turnaround Jump S	0.688	0.061	7.697
action_type Running Reverse L vs Turnaround Jump S	1.247	0.275	5.645
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.028	0.012	0.063
action_type Step Back Jump sh vs Turnaround Jump S	0.877	0.577	1.333
action_type Tip Layup Shot vs Turnaround Jump S	1.524	0.094	24.578
action_type Tip Shot vs Turnaround Jump S	2.797	1.948	4.017
action_type Turnaround Bank s vs Turnaround Jump S	0.376	0.196	0.722
action_type Turnaround Fadeaw vs Turnaround Jump S	1.037	0.809	1.329
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.477	0.365	5.983
attendance	1.000	1.000	1.000

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	69.8	Somers' D	0.397
Percent Discordant	30.1	Gamma	0.397
Percent Tied	0.0	Tau-a	0.196
Pairs	163169880	c	0.699

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
240.5835	27	<.0001

The LOGISTIC Procedure

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
combined_shot_type	0	.	.
period	6	22.0436	0.0012
minutes_remaining	1	22.8586	<.0001
playoffs	1	0.0033	0.9545
seconds_remaining	1	22.7122	<.0001
shot_distance	1	0.9101	0.3401
shot_type	1	1.8959	0.1685
shot_zone_area	5	64.7280	<.0001
shot_zone_basic	6	38.9217	<.0001
shot_zone_range	4	84.0423	<.0001
game_date	1	13.6515	0.0002
arena_temp	1	25.9952	<.0001
avgnoisedb	1	0.1295	0.7189

Step 3. Effect shot_zone_range entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	35327.083	31222.392
SC	35335.237	31687.177
-2 Log L	35325.083	31108.392

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	4216.6913	56	<.0001
Score	3897.9280	56	<.0001
Wald	2892.3760	56	<.0001

The LOGISTIC Procedure

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2258.5349	<.0001
shot_zone_range	4	61.7705	<.0001
attendance	1	208.7410	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	1.7930	14.4173	0.0155	0.9010
action_type	**Alley Oop Dunk Sh**	1	-1.3928	14.4216	0.0093	0.9231
action_type	**Alley Oop Layup s**	1	0.6361	14.4170	0.0019	0.9648
action_type	**Cutting Layup Sho**	1	0.7011	14.4396	0.0024	0.9613
action_type	**Driving Bank shot**	1	0.7937	14.4652	0.0030	0.9562
action_type	**Driving Dunk Shot**	1	-2.2015	14.4203	0.0233	0.8787
action_type	**Driving Finger Ro**	1	-0.3402	14.4168	0.0006	0.9812
action_type	**Driving Floating**	1	1.5240	14.4484	0.0111	0.9160
action_type	**Driving Hook Shot**	1	1.0539	14.4255	0.0053	0.9418
action_type	**Driving Jump shot**	1	1.8834	14.4205	0.0171	0.8961
action_type	**Driving Layup Sho**	1	0.4684	14.4147	0.0011	0.9741
action_type	**Driving Reverse L**	1	0.3977	14.4167	0.0008	0.9780
action_type	**Driving Slam Dunk**	1	-2.2098	14.4487	0.0234	0.8784
action_type	**Dunk Shot**	1	0.2749	14.4155	0.0004	0.9848
action_type	**Fadeaway Bank sho**	1	-0.4355	14.4271	0.0009	0.9759
action_type	**Fadeaway Jump Sho**	1	1.4443	14.4148	0.0100	0.9202
action_type	**Finger Roll Layup**	1	-0.0479	14.4227	0.0000	0.9973
action_type	**Finger Roll Shot**	1	1.6600	14.4198	0.0133	0.9084
action_type	**Floating Jump sho**	1	0.6490	14.4164	0.0020	0.9641
action_type	**Follow Up Dunk Sh**	1	-0.7712	14.4517	0.0028	0.9574
action_type	**Hook Bank Shot**	1	-10.6211	197.3	0.0029	0.9571
action_type	**Hook Shot**	1	2.1109	14.4165	0.0214	0.8836
action_type	**Jump Bank Shot**	1	0.4291	14.4152	0.0009	0.9763
action_type	**Jump Hook Shot**	1	0.5246	14.4236	0.0013	0.9710
action_type	**Jump Shot**	1	2.4948	14.4146	0.0300	0.8626
action_type	**Layup Shot**	1	1.9823	14.4146	0.0189	0.8906
action_type	**Pullup Bank shot**	1	1.4774	14.4270	0.0105	0.9184
action_type	**Pullup Jump shot**	1	0.8035	14.4150	0.0031	0.9555
action_type	**Putback Dunk Shot**	1	0.9144	14.4655	0.0040	0.9496

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Putback Layup Sho	1	0.7130	14.4313	0.0024	0.9606
action_type	Putback Slam Dunk	1	1.4843	14.4811	0.0105	0.9184
action_type	Reverse Dunk Shot	1	-0.8697	14.4218	0.0036	0.9519
action_type	Reverse Layup Sho	1	0.9616	14.4150	0.0044	0.9468
action_type	Reverse Slam Dunk	1	-10.6827	114.7	0.0087	0.9258
action_type	Running Bank shot	1	-0.0360	14.4203	0.0000	0.9980
action_type	Running Dunk Shot	1	-0.5552	14.4334	0.0015	0.9693
action_type	Running Finger Ro	1	1.7400	14.4297	0.0145	0.9040
action_type	Running Hook Shot	1	-0.3851	14.4241	0.0007	0.9787
action_type	Running Jump Shot	1	0.5523	14.4148	0.0015	0.9694
action_type	Running Layup Sho	1	0.6528	14.4177	0.0020	0.9639
action_type	Running Pull-Up J	1	0.9814	14.4650	0.0046	0.9459
action_type	Running Reverse L	1	1.3437	14.4342	0.0087	0.9258
action_type	Running Slam Dunk	1	-10.3912	442.5	0.0006	0.9813
action_type	Running Tip Shot	1	13.6825	441.9	0.0010	0.9753
action_type	Slam Dunk Shot	1	-2.4623	14.4202	0.0292	0.8644
action_type	Step Back Jump sh	1	1.2878	14.4160	0.0080	0.9288
action_type	Tip Layup Shot	1	1.5449	14.4814	0.0114	0.9150
action_type	Tip Shot	1	2.1524	14.4155	0.0223	0.8813
action_type	Turnaround Bank s	1	0.2726	14.4181	0.0004	0.9849
action_type	Turnaround Fadeaw	1	1.3809	14.4150	0.0092	0.9237
action_type	Turnaround Finger	1	-10.5172	313.0	0.0011	0.9732
action_type	Turnaround Hook S	1	1.6073	14.4315	0.0124	0.9113
shot_zone_range	16-24 ft.	1	-0.9059	0.2038	19.7621	<.0001
shot_zone_range	24+ ft.	1	-0.7669	0.2042	14.1019	0.0002
shot_zone_range	8-16 ft.	1	-0.7219	0.2041	12.5087	0.0004
shot_zone_range	Back Court Shot	1	2.9305	0.8091	13.1181	0.0003
attendance		1	-0.00018	0.000013	208.7410	<.0001

Odds Ratio Estimates				
Effect		Point Estimate	95% Wald Confidence Limits	
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	0.065	0.026	0.163
action_type	Alley Oop Layup s vs Turnaround Jump S	0.495	0.283	0.865
action_type	Cutting Layup Sho vs Turnaround Jump S	0.528	0.096	2.917
action_type	Driving Bank shot vs Turnaround Jump S	0.580	0.051	6.537

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Driving Dunk Shot vs Turnaround Jump S	0.029	0.013	0.066
action_type Driving Finger Ro vs Turnaround Jump S	0.187	0.109	0.320
action_type Driving Floating vs Turnaround Jump S	1.203	0.166	8.717
action_type Driving Hook Shot vs Turnaround Jump S	0.752	0.242	2.341
action_type Driving Jump shot vs Turnaround Jump S	1.724	0.741	4.008
action_type Driving Layup Sho vs Turnaround Jump S	0.419	0.343	0.511
action_type Driving Reverse L vs Turnaround Jump S	0.390	0.231	0.659
action_type Driving Slam Dunk vs Turnaround Jump S	0.029	0.004	0.211
action_type Dunk Shot vs Turnaround Jump S	0.345	0.240	0.495
action_type Fadeaway Bank sho vs Turnaround Jump S	0.170	0.051	0.569
action_type Fadeaway Jump Sho vs Turnaround Jump S	1.111	0.918	1.345
action_type Finger Roll Layup vs Turnaround Jump S	0.250	0.093	0.669
action_type Finger Roll Shot vs Turnaround Jump S	1.379	0.625	3.041
action_type Floating Jump sho vs Turnaround Jump S	0.502	0.311	0.809
action_type Follow Up Dunk Sh vs Turnaround Jump S	0.121	0.015	0.966
action_type Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Hook Shot vs Turnaround Jump S	2.164	1.311	3.573
action_type Jump Bank Shot vs Turnaround Jump S	0.403	0.296	0.549
action_type Jump Hook Shot vs Turnaround Jump S	0.443	0.157	1.248
action_type Jump Shot vs Turnaround Jump S	3.177	2.756	3.662
action_type Layup Shot vs Turnaround Jump S	1.903	1.579	2.294
action_type Pullup Bank shot vs Turnaround Jump S	1.149	0.345	3.825
action_type Pullup Jump shot vs Turnaround Jump S	0.585	0.452	0.758
action_type Putback Dunk Shot vs Turnaround Jump S	0.654	0.058	7.433
action_type Putback Layup Sho vs Turnaround Jump S	0.535	0.132	2.167
action_type Putback Slam Dunk vs Turnaround Jump S	1.157	0.072	18.583
action_type Reverse Dunk Shot vs Turnaround Jump S	0.110	0.043	0.279
action_type Reverse Layup Sho vs Turnaround Jump S	0.686	0.519	0.906
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.253	0.111	0.577
action_type Running Dunk Shot vs Turnaround Jump S	0.150	0.034	0.662
action_type Running Finger Ro vs Turnaround Jump S	1.494	0.395	5.652
action_type Running Hook Shot vs Turnaround Jump S	0.178	0.062	0.514
action_type Running Jump Shot vs Turnaround Jump S	0.455	0.367	0.564
action_type Running Layup Sho vs Turnaround Jump S	0.504	0.269	0.943

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Running Pull-Up J vs Turnaround Jump S	0.699	0.062	7.833
action_type Running Reverse L vs Turnaround Jump S	1.005	0.221	4.564
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.022	0.010	0.051
action_type Step Back Jump sh vs Turnaround Jump S	0.950	0.624	1.447
action_type Tip Layup Shot vs Turnaround Jump S	1.229	0.076	19.853
action_type Tip Shot vs Turnaround Jump S	2.256	1.552	3.280
action_type Turnaround Bank s vs Turnaround Jump S	0.344	0.179	0.662
action_type Turnaround Fadeaw vs Turnaround Jump S	1.043	0.813	1.338
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.308	0.322	5.320
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.691	0.616	0.775
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.794	0.704	0.895
shot_zone_range 8-16 ft. vs Less Than 8 ft.	0.830	0.740	0.932
shot_zone_range Back Court Shot vs Less Than 8 ft.	32.018	4.401	232.913
attendance	1.000	1.000	1.000

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.4	Somers' D	0.409
Percent Discordant	29.5	Gamma	0.409
Percent Tied	0.0	Tau-a	0.202
Pairs	163169880	c	0.704

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
156.4344	23	<.0001

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
combined_shot_type	0	.	.
period	6	23.7694	0.0006
minutes_remaining	1	16.7137	<.0001
playoffs	1	0.0050	0.9436

The LOGISTIC Procedure

Analysis of Effects Eligible for Entry			
Effect	**DF**	**Score Chi-Square**	**Pr > ChiSq**
seconds_remaining	1	18.6415	<.0001
shot_distance	1	0.4760	0.4903
shot_type	1	1.1479	0.2840
shot_zone_area	4	36.1015	<.0001
shot_zone_basic	5	17.7094	0.0033
game_date	1	14.1976	0.0002
arena_temp	1	25.9818	<.0001
avgnoisedb	1	0.0886	0.7659

Step 4. Effect shot_zone_area entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	35327.083	31194.185
SC	35335.237	31691.587
-2 Log L	35325.083	31072.185

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	4252.8979	60	<.0001
Score	3930.0885	60	<.0001
Wald	2919.6235	60	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2272.4459	<.0001
shot_zone_area	5	49.1667	<.0001
shot_zone_range	3	55.6654	<.0001
attendance	1	208.1007	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

The LOGISTIC Procedure

shot_zone_rangeBack Court Shot =	-0.04167 * Intercept + 1.04167 * shot_zone_aBack Court(BC) - 0.20833 * shot_zone_aCenter(C) - 0.20833 * shot_zone_aLeft Side Center(LC) - 0.20833 * shot_zone_aLeft Side(L) - 0.20833 * shot_zone_aRight Side Center(RC) + 0.25 * shot_zone_range16-24 ft. + 0.25 * shot_zone_range24+ ft. + 0.25 * shot_zone_range8-16 ft.

Analysis of Maximum Likelihood Estimates

Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	1.6884	14.4173	0.0137	0.9068
action_type	**Alley Oop Dunk Sh**	1	-1.3885	14.4220	0.0093	0.9233
action_type	**Alley Oop Layup s**	1	0.6405	14.4175	0.0020	0.9646
action_type	**Cutting Layup Sho**	1	0.7055	14.4401	0.0024	0.9610
action_type	**Driving Bank shot**	1	0.7981	14.4656	0.0030	0.9560
action_type	**Driving Dunk Shot**	1	-2.1971	14.4207	0.0232	0.8789
action_type	**Driving Finger Ro**	1	-0.3359	14.4173	0.0005	0.9814
action_type	**Driving Floating**	1	1.4951	14.4487	0.0107	0.9176
action_type	**Driving Hook Shot**	1	1.0582	14.4259	0.0054	0.9415
action_type	**Driving Jump shot**	1	1.8832	14.4210	0.0171	0.8961
action_type	**Driving Layup Sho**	1	0.4727	14.4151	0.0011	0.9738
action_type	**Driving Reverse L**	1	0.4021	14.4171	0.0008	0.9778
action_type	**Driving Slam Dunk**	1	-2.2054	14.4491	0.0233	0.8787
action_type	**Dunk Shot**	1	0.2788	14.4159	0.0004	0.9846
action_type	**Fadeaway Bank sho**	1	-0.4730	14.4276	0.0011	0.9738
action_type	**Fadeaway Jump Sho**	1	1.4348	14.4152	0.0099	0.9207
action_type	**Finger Roll Layup**	1	-0.0435	14.4232	0.0000	0.9976
action_type	**Finger Roll Shot**	1	1.6632	14.4202	0.0133	0.9082
action_type	**Floating Jump sho**	1	0.6633	14.4168	0.0021	0.9633
action_type	**Follow Up Dunk Sh**	1	-0.7667	14.4521	0.0028	0.9577
action_type	**Hook Bank Shot**	1	-10.6214	197.4	0.0029	0.9571
action_type	**Hook Shot**	1	2.1123	14.4170	0.0215	0.8835
action_type	**Jump Bank Shot**	1	0.3808	14.4157	0.0007	0.9789
action_type	**Jump Hook Shot**	1	0.5261	14.4241	0.0013	0.9709
action_type	**Jump Shot**	1	2.5039	14.4150	0.0302	0.8621
action_type	**Layup Shot**	1	1.9868	14.4151	0.0190	0.8904
action_type	**Pullup Bank shot**	1	1.4390	14.4274	0.0099	0.9206
action_type	**Pullup Jump shot**	1	0.8369	14.4155	0.0034	0.9537
action_type	**Putback Dunk Shot**	1	0.9187	14.4659	0.0040	0.9494
action_type	**Putback Layup Sho**	1	0.7175	14.4317	0.0025	0.9603
action_type	**Putback Slam Dunk**	1	1.4887	14.4815	0.0106	0.9181
action_type	**Reverse Dunk Shot**	1	-0.8654	14.4223	0.0036	0.9522

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	**Reverse Layup Sho**	1	0.9659	14.4154	0.0045	0.9466
action_type	**Reverse Slam Dunk**	1	-10.6783	114.7	0.0087	0.9258
action_type	**Running Bank shot**	1	-0.0597	14.4207	0.0000	0.9967
action_type	**Running Dunk Shot**	1	-0.5509	14.4338	0.0015	0.9696
action_type	**Running Finger Ro**	1	1.7412	14.4301	0.0146	0.9040
action_type	**Running Hook Shot**	1	-0.3789	14.4245	0.0007	0.9790
action_type	**Running Jump Shot**	1	0.5634	14.4152	0.0015	0.9688
action_type	**Running Layup Sho**	1	0.6571	14.4182	0.0021	0.9636
action_type	**Running Pull-Up J**	1	1.0201	14.4653	0.0050	0.9438
action_type	**Running Reverse L**	1	1.3480	14.4346	0.0087	0.9256
action_type	**Running Slam Dunk**	1	-10.3871	442.5	0.0006	0.9813
action_type	**Running Tip Shot**	1	13.6869	441.9	0.0010	0.9753
action_type	**Slam Dunk Shot**	1	-2.4580	14.4207	0.0291	0.8647
action_type	**Step Back Jump sh**	1	1.2737	14.4164	0.0078	0.9296
action_type	**Tip Layup Shot**	1	1.5492	14.4818	0.0114	0.9148
action_type	**Tip Shot**	1	2.1567	14.4160	0.0224	0.8811
action_type	**Turnaround Bank s**	1	0.2281	14.4185	0.0003	0.9874
action_type	**Turnaround Fadeaw**	1	1.3710	14.4154	0.0090	0.9242
action_type	**Turnaround Finger**	1	-10.5130	313.0	0.0011	0.9732
action_type	**Turnaround Hook S**	1	1.6260	14.4319	0.0127	0.9103
shot_zone_area	**Back Court(BC)**	1	3.0233	0.8428	12.8669	0.0003
shot_zone_area	**Center(C)**	1	-0.7151	0.1714	17.3965	<.0001
shot_zone_area	**Left Side Center(LC)**	1	-0.6180	0.1725	12.8389	0.0003
shot_zone_area	**Left Side(L)**	1	-0.4455	0.1726	6.6594	0.0099
shot_zone_area	**Right Side Center(RC)**	1	-0.7220	0.1719	17.6332	<.0001
shot_zone_range	**16-24 ft.**	1	-0.1913	0.0281	46.4562	<.0001
shot_zone_range	**24+ ft.**	1	-0.0131	0.0331	0.1570	0.6919
shot_zone_range	**8-16 ft.**	1	-0.0729	0.0323	5.0784	0.0242
shot_zone_range	**Back Court Shot**	0	0	.	.	.
attendance		1	-0.00018	0.000013	208.1007	<.0001

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Alley Oop Dunk Sh vs Turnaround Jump S	0.066	0.026	0.165
action_type Alley Oop Layup s vs Turnaround Jump S	0.502	0.287	0.877
action_type Cutting Layup Sho vs Turnaround Jump S	0.536	0.097	2.958
action_type Driving Bank shot vs Turnaround Jump S	0.588	0.052	6.627
action_type Driving Dunk Shot vs Turnaround Jump S	0.029	0.013	0.067
action_type Driving Finger Ro vs Turnaround Jump S	0.189	0.110	0.324
action_type Driving Floating vs Turnaround Jump S	1.180	0.164	8.515
action_type Driving Hook Shot vs Turnaround Jump S	0.762	0.245	2.373
action_type Driving Jump shot vs Turnaround Jump S	1.740	0.748	4.045
action_type Driving Layup Sho vs Turnaround Jump S	0.425	0.348	0.518
action_type Driving Reverse L vs Turnaround Jump S	0.396	0.234	0.668
action_type Driving Slam Dunk vs Turnaround Jump S	0.029	0.004	0.214
action_type Dunk Shot vs Turnaround Jump S	0.350	0.244	0.502
action_type Fadeaway Bank sho vs Turnaround Jump S	0.165	0.049	0.554
action_type Fadeaway Jump Sho vs Turnaround Jump S	1.111	0.918	1.345
action_type Finger Roll Layup vs Turnaround Jump S	0.253	0.095	0.678
action_type Finger Roll Shot vs Turnaround Jump S	1.396	0.633	3.079
action_type Floating Jump sho vs Turnaround Jump S	0.514	0.318	0.829
action_type Follow Up Dunk Sh vs Turnaround Jump S	0.123	0.015	0.979
action_type Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Hook Shot vs Turnaround Jump S	2.187	1.325	3.611
action_type Jump Bank Shot vs Turnaround Jump S	0.387	0.284	0.528
action_type Jump Hook Shot vs Turnaround Jump S	0.448	0.159	1.261
action_type Jump Shot vs Turnaround Jump S	3.236	2.806	3.732
action_type Layup Shot vs Turnaround Jump S	1.929	1.601	2.326
action_type Pullup Bank shot vs Turnaround Jump S	1.116	0.335	3.717
action_type Pullup Jump shot vs Turnaround Jump S	0.611	0.471	0.792
action_type Putback Dunk Shot vs Turnaround Jump S	0.663	0.058	7.534
action_type Putback Layup Sho vs Turnaround Jump S	0.542	0.134	2.197
action_type Putback Slam Dunk vs Turnaround Jump S	1.173	0.073	18.839
action_type Reverse Dunk Shot vs Turnaround Jump S	0.111	0.044	0.283
action_type Reverse Layup Sho vs Turnaround Jump S	0.695	0.526	0.919
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.249	0.109	0.569
action_type Running Dunk Shot vs Turnaround Jump S	0.153	0.035	0.671

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Running Finger Ro vs Turnaround Jump S	1.509	0.399	5.709
action_type Running Hook Shot vs Turnaround Jump S	0.181	0.063	0.522
action_type Running Jump Shot vs Turnaround Jump S	0.465	0.375	0.576
action_type Running Layup Sho vs Turnaround Jump S	0.510	0.273	0.956
action_type Running Pull-Up J vs Turnaround Jump S	0.734	0.066	8.186
action_type Running Reverse L vs Turnaround Jump S	1.019	0.224	4.627
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.023	0.010	0.052
action_type Step Back Jump sh vs Turnaround Jump S	0.946	0.621	1.441
action_type Tip Layup Shot vs Turnaround Jump S	1.246	0.077	20.125
action_type Tip Shot vs Turnaround Jump S	2.287	1.573	3.325
action_type Turnaround Bank s vs Turnaround Jump S	0.332	0.173	0.639
action_type Turnaround Fadeaw vs Turnaround Jump S	1.042	0.812	1.337
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.345	0.330	5.481
shot_zone_area Back Court(BC) vs Right Side(R)	34.677	4.771	252.043
shot_zone_area Center(C) vs Right Side(R)	0.825	0.747	0.912
shot_zone_area Left Side Center(LC) vs Right Side(R)	0.909	0.812	1.018
shot_zone_area Left Side(L) vs Right Side(R)	1.080	0.975	1.197
shot_zone_area Right Side Center(RC) vs Right Side(R)	0.819	0.736	0.913
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.626	0.547	0.716
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.748	0.650	0.861
shot_zone_range 8-16 ft. vs Less Than 8 ft.	0.705	0.617	0.804
attendance	1.000	1.000	1.000

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.6	Somers' D	0.411
Percent Discordant	29.4	Gamma	0.411
Percent Tied	0.0	Tau-a	0.203
Pairs	163169880	c	0.706

The LOGISTIC Procedure

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
121.1514	19	<.0001

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
combined_shot_type	0	.	.
period	6	22.9916	0.0008
minutes_remaining	1	16.7780	<.0001
playoffs	1	0.0013	0.9714
seconds_remaining	1	18.7247	<.0001
shot_distance	1	1.5583	0.2119
shot_type	1	0.8639	0.3527
shot_zone_basic	5	19.8905	0.0013
game_date	1	15.3362	<.0001
arena_temp	1	25.2151	<.0001
avgnoisedb	1	0.1156	0.7338

Step 5. Effect arena_temp entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	35327.083	31170.961
SC	35335.237	31676.517
-2 Log L	35325.083	31046.961

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	4278.1221	61	<.0001
Score	3951.6058	61	<.0001
Wald	2936.3840	61	<.0001

The LOGISTIC Procedure

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2269.3097	<.0001
shot_zone_area	5	48.3427	<.0001
shot_zone_range	3	55.0754	<.0001
attendance	1	195.8670	<.0001
arena_temp	1	25.1893	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

shot_zone_rangeBack Court Shot =	-0.04167 * Intercept + 1.04167 * shot_zone_aBack Court(BC) - 0.20833 * shot_zone_aCenter(C) - 0.20833 * shot_zone_aLeft Side Center(LC) - 0.20833 * shot_zone_aLeft Side(L) - 0.20833 * shot_zone_aRight Side Center(RC) + 0.25 * shot_zone_range16-24 ft. + 0.25 * shot_zone_range24+ ft. + 0.25 * shot_zone_range8-16 ft.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	3.9950	14.4231	0.0767	0.7818
action_type	**Alley Oop Dunk Sh**	1	-1.3854	14.4205	0.0092	0.9235
action_type	**Alley Oop Layup s**	1	0.6296	14.4159	0.0019	0.9652
action_type	**Cutting Layup Sho**	1	0.6563	14.4385	0.0021	0.9637
action_type	**Driving Bank shot**	1	0.7893	14.4642	0.0030	0.9565
action_type	**Driving Dunk Shot**	1	-2.2013	14.4191	0.0233	0.8787
action_type	**Driving Finger Ro**	1	-0.3331	14.4157	0.0005	0.9816
action_type	**Driving Floating**	1	1.4722	14.4475	0.0104	0.9188
action_type	**Driving Hook Shot**	1	1.0530	14.4244	0.0053	0.9418
action_type	**Driving Jump shot**	1	1.8838	14.4194	0.0171	0.8961
action_type	**Driving Layup Sho**	1	0.4702	14.4135	0.0011	0.9740
action_type	**Driving Reverse L**	1	0.4076	14.4156	0.0008	0.9774
action_type	**Driving Slam Dunk**	1	-2.2331	14.4476	0.0239	0.8772
action_type	**Dunk Shot**	1	0.2756	14.4143	0.0004	0.9847
action_type	**Fadeaway Bank sho**	1	-0.4677	14.4260	0.0011	0.9741
action_type	**Fadeaway Jump Sho**	1	1.4325	14.4136	0.0099	0.9208
action_type	**Finger Roll Layup**	1	-0.0135	14.4216	0.0000	0.9993
action_type	**Finger Roll Shot**	1	1.6568	14.4186	0.0132	0.9085
action_type	**Floating Jump sho**	1	0.6622	14.4152	0.0021	0.9634
action_type	**Follow Up Dunk Sh**	1	-0.7474	14.4505	0.0027	0.9588
action_type	**Hook Bank Shot**	1	-10.6273	197.2	0.0029	0.9570
action_type	**Hook Shot**	1	2.1141	14.4154	0.0215	0.8834

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Jump Bank Shot	1	0.3831	14.4141	0.0007	0.9788
action_type	Jump Hook Shot	1	0.5525	14.4225	0.0015	0.9694
action_type	Jump Shot	1	2.4994	14.4135	0.0301	0.8623
action_type	Layup Shot	1	1.9829	14.4135	0.0189	0.8906
action_type	Pullup Bank shot	1	1.4345	14.4259	0.0099	0.9208
action_type	Pullup Jump shot	1	0.8256	14.4139	0.0033	0.9543
action_type	Putback Dunk Shot	1	0.9385	14.4646	0.0042	0.9483
action_type	Putback Layup Sho	1	0.6946	14.4302	0.0023	0.9616
action_type	Putback Slam Dunk	1	1.5164	14.4800	0.0110	0.9166
action_type	Reverse Dunk Shot	1	-0.8793	14.4207	0.0037	0.9514
action_type	Reverse Layup Sho	1	0.9628	14.4139	0.0045	0.9467
action_type	Reverse Slam Dunk	1	-10.6706	114.5	0.0087	0.9258
action_type	Running Bank shot	1	-0.0725	14.4192	0.0000	0.9960
action_type	Running Dunk Shot	1	-0.5739	14.4323	0.0016	0.9683
action_type	Running Finger Ro	1	1.7531	14.4285	0.0148	0.9033
action_type	Running Hook Shot	1	-0.3604	14.4230	0.0006	0.9801
action_type	Running Jump Shot	1	0.5583	14.4137	0.0015	0.9691
action_type	Running Layup Sho	1	0.6466	14.4166	0.0020	0.9642
action_type	Running Pull-Up J	1	0.9693	14.4637	0.0045	0.9466
action_type	Running Reverse L	1	1.2884	14.4331	0.0080	0.9289
action_type	Running Slam Dunk	1	-10.3347	442.5	0.0005	0.9814
action_type	Running Tip Shot	1	13.7491	441.9	0.0010	0.9752
action_type	Slam Dunk Shot	1	-2.4630	14.4191	0.0292	0.8644
action_type	Step Back Jump sh	1	1.2670	14.4149	0.0077	0.9300
action_type	Tip Layup Shot	1	1.5923	14.4807	0.0121	0.9124
action_type	Tip Shot	1	2.1615	14.4144	0.0225	0.8808
action_type	Turnaround Bank s	1	0.2249	14.4170	0.0002	0.9876
action_type	Turnaround Fadeaw	1	1.3669	14.4139	0.0090	0.9244
action_type	Turnaround Finger	1	-10.4912	313.0	0.0011	0.9733
action_type	Turnaround Hook S	1	1.6590	14.4304	0.0132	0.9085
shot_zone_area	Back Court(BC)	1	3.0166	0.8425	12.8206	0.0003
shot_zone_area	Center(C)	1	-0.7098	0.1714	17.1545	<.0001
shot_zone_area	Left Side Center(LC)	1	-0.6196	0.1724	12.9156	0.0003
shot_zone_area	Left Side(L)	1	-0.4444	0.1726	6.6310	0.0100
shot_zone_area	Right Side Center(RC)	1	-0.7213	0.1719	17.6108	<.0001

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
shot_zone_range	16-24 ft.	1	-0.1906	0.0281	46.1134	<.0001
shot_zone_range	24+ ft.	1	-0.0106	0.0331	0.1023	0.7491
shot_zone_range	8-16 ft.	1	-0.0721	0.0324	4.9603	0.0259
shot_zone_range	Back Court Shot	0	0	.	.	.
attendance		1	-0.00018	0.000013	195.8670	<.0001
arena_temp		1	-0.0339	0.00676	25.1893	<.0001

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Alley Oop Dunk Sh vs Turnaround Jump S	0.067	0.027	0.166
action_type Alley Oop Layup s vs Turnaround Jump S	0.499	0.286	0.872
action_type Cutting Layup Sho vs Turnaround Jump S	0.513	0.093	2.830
action_type Driving Bank shot vs Turnaround Jump S	0.586	0.052	6.624
action_type Driving Dunk Shot vs Turnaround Jump S	0.029	0.013	0.067
action_type Driving Finger Ro vs Turnaround Jump S	0.191	0.111	0.327
action_type Driving Floating vs Turnaround Jump S	1.159	0.159	8.458
action_type Driving Hook Shot vs Turnaround Jump S	0.762	0.245	2.374
action_type Driving Jump shot vs Turnaround Jump S	1.749	0.751	4.074
action_type Driving Layup Sho vs Turnaround Jump S	0.426	0.349	0.520
action_type Driving Reverse L vs Turnaround Jump S	0.400	0.237	0.675
action_type Driving Slam Dunk vs Turnaround Jump S	0.029	0.004	0.209
action_type Dunk Shot vs Turnaround Jump S	0.350	0.244	0.503
action_type Fadeaway Bank sho vs Turnaround Jump S	0.167	0.050	0.560
action_type Fadeaway Jump Sho vs Turnaround Jump S	1.114	0.920	1.349
action_type Finger Roll Layup vs Turnaround Jump S	0.262	0.098	0.703
action_type Finger Roll Shot vs Turnaround Jump S	1.394	0.632	3.075
action_type Floating Jump sho vs Turnaround Jump S	0.516	0.319	0.833
action_type Follow Up Dunk Sh vs Turnaround Jump S	0.126	0.016	1.002
action_type Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Hook Shot vs Turnaround Jump S	2.202	1.334	3.637
action_type Jump Bank Shot vs Turnaround Jump S	0.390	0.286	0.532
action_type Jump Hook Shot vs Turnaround Jump S	0.462	0.164	1.301
action_type Jump Shot vs Turnaround Jump S	3.237	2.807	3.733
action_type Layup Shot vs Turnaround Jump S	1.932	1.602	2.329
action_type Pullup Bank shot vs Turnaround Jump S	1.116	0.335	3.722

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Pullup Jump shot vs Turnaround Jump S	0.607	0.468	0.787
action_type Putback Dunk Shot vs Turnaround Jump S	0.680	0.060	7.765
action_type Putback Layup Sho vs Turnaround Jump S	0.533	0.131	2.158
action_type Putback Slam Dunk vs Turnaround Jump S	1.212	0.075	19.465
action_type Reverse Dunk Shot vs Turnaround Jump S	0.110	0.044	0.280
action_type Reverse Layup Sho vs Turnaround Jump S	0.696	0.527	0.920
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.247	0.108	0.565
action_type Running Dunk Shot vs Turnaround Jump S	0.150	0.034	0.660
action_type Running Finger Ro vs Turnaround Jump S	1.535	0.406	5.800
action_type Running Hook Shot vs Turnaround Jump S	0.185	0.064	0.535
action_type Running Jump Shot vs Turnaround Jump S	0.465	0.375	0.576
action_type Running Layup Sho vs Turnaround Jump S	0.508	0.271	0.950
action_type Running Pull-Up J vs Turnaround Jump S	0.701	0.063	7.809
action_type Running Reverse L vs Turnaround Jump S	0.964	0.212	4.388
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.023	0.010	0.052
action_type Step Back Jump sh vs Turnaround Jump S	0.944	0.620	1.438
action_type Tip Layup Shot vs Turnaround Jump S	1.307	0.080	21.318
action_type Tip Shot vs Turnaround Jump S	2.309	1.588	3.358
action_type Turnaround Bank s vs Turnaround Jump S	0.333	0.173	0.640
action_type Turnaround Fadeaw vs Turnaround Jump S	1.043	0.813	1.339
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.397	0.342	5.703
shot_zone_area Back Court(BC) vs Right Side(R)	34.403	4.737	249.839
shot_zone_area Center(C) vs Right Side(R)	0.828	0.750	0.915
shot_zone_area Left Side Center(LC) vs Right Side(R)	0.907	0.810	1.015
shot_zone_area Left Side(L) vs Right Side(R)	1.080	0.975	1.197
shot_zone_area Right Side Center(RC) vs Right Side(R)	0.819	0.735	0.912
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.629	0.550	0.719
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.753	0.654	0.867
shot_zone_range 8-16 ft. vs Less Than 8 ft.	0.708	0.620	0.808
attendance	1.000	1.000	1.000
arena_temp	0.967	0.954	0.980

The LOGISTIC Procedure

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.7	**Somers' D**	0.414
Percent Discordant	29.3	**Gamma**	0.414
Percent Tied	0.0	**Tau-a**	0.204
Pairs	163169880	**c**	0.707

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
96.0253	18	<.0001

Analysis of Effects Eligible for Entry			
Effect	**DF**	**Score Chi-Square**	**Pr > ChiSq**
combined_shot_type	0	.	.
period	6	23.0603	0.0008
minutes_remaining	1	17.0192	<.0001
playoffs	1	0.0761	0.7827
seconds_remaining	1	18.6831	<.0001
shot_distance	1	1.4153	0.2342
shot_type	1	0.8430	0.3585
shot_zone_basic	5	19.4886	0.0016
game_date	1	16.4273	<.0001
avgnoisedb	1	0.1141	0.7355

Step 6. Effect seconds_remaining entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	35327.083	31154.275
SC	35335.237	31667.985
-2 Log L	35325.083	31028.275

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	4296.8083	62	<.0001
Score	3967.5621	62	<.0001
Wald	2949.2225	62	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2273.8704	<.0001
seconds_remaining	1	18.6728	<.0001
shot_zone_area	5	47.7347	<.0001
shot_zone_range	3	55.0623	<.0001
attendance	1	195.3869	<.0001
arena_temp	1	25.1474	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

shot_zone_rangeBack Court Shot =	-0.04167 * Intercept + 1.04167 * shot_zone_aBack Court(BC) - 0.20833 * shot_zone_aCenter(C) - 0.20833 * shot_zone_aLeft Side Center(LC) - 0.20833 * shot_zone_aLeft Side(L) - 0.20833 * shot_zone_aRight Side Center(RC) + 0.25 * shot_zone_range16-24 ft. + 0.25 * shot_zone_range24+ ft. + 0.25 * shot_zone_range8-16 ft.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	4.0733	14.4219	0.0798	0.7776
action_type	**Alley Oop Dunk Sh**	1	-1.3856	14.4193	0.0092	0.9234
action_type	**Alley Oop Layup s**	1	0.6393	14.4147	0.0020	0.9646
action_type	**Cutting Layup Sho**	1	0.6703	14.4374	0.0022	0.9630
action_type	**Driving Bank shot**	1	0.8330	14.4631	0.0033	0.9541
action_type	**Driving Dunk Shot**	1	-2.2015	14.4179	0.0233	0.8786
action_type	**Driving Finger Ro**	1	-0.3402	14.4145	0.0006	0.9812
action_type	**Driving Floating**	1	1.4797	14.4466	0.0105	0.9184
action_type	**Driving Hook Shot**	1	1.0551	14.4232	0.0054	0.9417
action_type	**Driving Jump shot**	1	1.8853	14.4182	0.0171	0.8960
action_type	**Driving Layup Sho**	1	0.4662	14.4123	0.0010	0.9742
action_type	**Driving Reverse L**	1	0.3991	14.4144	0.0008	0.9779
action_type	**Driving Slam Dunk**	1	-2.2421	14.4464	0.0241	0.8767
action_type	**Dunk Shot**	1	0.2749	14.4131	0.0004	0.9848
action_type	**Fadeaway Bank sho**	1	-0.4763	14.4248	0.0011	0.9737

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Fadeaway Jump Sho	1	1.4317	14.4124	0.0099	0.9209
action_type	Finger Roll Layup	1	-0.0155	14.4204	0.0000	0.9991
action_type	Finger Roll Shot	1	1.6557	14.4174	0.0132	0.9086
action_type	Floating Jump sho	1	0.6544	14.4140	0.0021	0.9638
action_type	Follow Up Dunk Sh	1	-0.7617	14.4493	0.0028	0.9580
action_type	Hook Bank Shot	1	-10.6399	197.2	0.0029	0.9570
action_type	Hook Shot	1	2.1082	14.4142	0.0214	0.8837
action_type	Jump Bank Shot	1	0.3814	14.4129	0.0007	0.9789
action_type	Jump Hook Shot	1	0.5377	14.4213	0.0014	0.9703
action_type	Jump Shot	1	2.4994	14.4123	0.0301	0.8623
action_type	Layup Shot	1	1.9822	14.4123	0.0189	0.8906
action_type	Pullup Bank shot	1	1.4601	14.4246	0.0102	0.9194
action_type	Pullup Jump shot	1	0.8205	14.4127	0.0032	0.9546
action_type	Putback Dunk Shot	1	0.9547	14.4634	0.0044	0.9474
action_type	Putback Layup Sho	1	0.6682	14.4290	0.0021	0.9631
action_type	Putback Slam Dunk	1	1.5658	14.4788	0.0117	0.9139
action_type	Reverse Dunk Shot	1	-0.8796	14.4195	0.0037	0.9514
action_type	Reverse Layup Sho	1	0.9603	14.4127	0.0044	0.9469
action_type	Reverse Slam Dunk	1	-10.6799	114.6	0.0087	0.9257
action_type	Running Bank shot	1	-0.0651	14.4180	0.0000	0.9964
action_type	Running Dunk Shot	1	-0.5591	14.4311	0.0015	0.9691
action_type	Running Finger Ro	1	1.7418	14.4273	0.0146	0.9039
action_type	Running Hook Shot	1	-0.3595	14.4217	0.0006	0.9801
action_type	Running Jump Shot	1	0.5538	14.4125	0.0015	0.9693
action_type	Running Layup Sho	1	0.6514	14.4154	0.0020	0.9640
action_type	Running Pull-Up J	1	0.9570	14.4627	0.0044	0.9472
action_type	Running Reverse L	1	1.2785	14.4320	0.0078	0.9294
action_type	Running Slam Dunk	1	-10.4005	442.5	0.0006	0.9813
action_type	Running Tip Shot	1	13.7749	441.9	0.0010	0.9751
action_type	Slam Dunk Shot	1	-2.4708	14.4179	0.0294	0.8639
action_type	Step Back Jump sh	1	1.2674	14.4137	0.0077	0.9299
action_type	Tip Layup Shot	1	1.6331	14.4799	0.0127	0.9102
action_type	Tip Shot	1	2.1579	14.4132	0.0224	0.8810
action_type	Turnaround Bank s	1	0.2144	14.4158	0.0002	0.9881
action_type	Turnaround Fadeaw	1	1.3611	14.4127	0.0089	0.9248

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Turnaround Finger	1	-10.4806	312.9	0.0011	0.9733
action_type	Turnaround Hook S	1	1.6605	14.4292	0.0132	0.9084
seconds_remaining		1	-0.00338	0.000782	18.6728	<.0001
shot_zone_area	Back Court(BC)	1	2.9369	0.8427	12.1455	0.0005
shot_zone_area	Center(C)	1	-0.6955	0.1714	16.4589	<.0001
shot_zone_area	Left Side Center(LC)	1	-0.6026	0.1725	12.2121	0.0005
shot_zone_area	Left Side(L)	1	-0.4286	0.1726	6.1672	0.0130
shot_zone_area	Right Side Center(RC)	1	-0.7044	0.1719	16.7848	<.0001
shot_zone_range	16-24 ft.	1	-0.1912	0.0281	46.3752	<.0001
shot_zone_range	24+ ft.	1	-0.0160	0.0331	0.2319	0.6302
shot_zone_range	8-16 ft.	1	-0.0698	0.0324	4.6510	0.0310
shot_zone_range	Back Court Shot	0	0	.	.	.
attendance		1	-0.00018	0.000013	195.3869	<.0001
arena_temp		1	-0.0339	0.00676	25.1474	<.0001

Odds Ratio Estimates				
Effect		Point Estimate	95% Wald Confidence Limits	
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	0.067	0.027	0.167
action_type	Alley Oop Layup s vs Turnaround Jump S	0.505	0.289	0.882
action_type	Cutting Layup Sho vs Turnaround Jump S	0.520	0.094	2.878
action_type	Driving Bank shot vs Turnaround Jump S	0.612	0.054	6.945
action_type	Driving Dunk Shot vs Turnaround Jump S	0.029	0.013	0.067
action_type	Driving Finger Ro vs Turnaround Jump S	0.189	0.111	0.325
action_type	Driving Floating vs Turnaround Jump S	1.169	0.159	8.591
action_type	Driving Hook Shot vs Turnaround Jump S	0.765	0.245	2.382
action_type	Driving Jump shot vs Turnaround Jump S	1.754	0.754	4.081
action_type	Driving Layup Sho vs Turnaround Jump S	0.424	0.348	0.518
action_type	Driving Reverse L vs Turnaround Jump S	0.397	0.235	0.670
action_type	Driving Slam Dunk vs Turnaround Jump S	0.028	0.004	0.207
action_type	Dunk Shot vs Turnaround Jump S	0.350	0.244	0.503
action_type	Fadeaway Bank sho vs Turnaround Jump S	0.165	0.049	0.555
action_type	Fadeaway Jump Sho vs Turnaround Jump S	1.114	0.920	1.350
action_type	Finger Roll Layup vs Turnaround Jump S	0.262	0.098	0.703
action_type	Finger Roll Shot vs Turnaround Jump S	1.394	0.632	3.077
action_type	Floating Jump sho vs Turnaround Jump S	0.512	0.317	0.827

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Follow Up Dunk Sh vs Turnaround Jump S	0.124	0.016	0.990
action_type Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Hook Shot vs Turnaround Jump S	2.192	1.327	3.621
action_type Jump Bank Shot vs Turnaround Jump S	0.390	0.286	0.532
action_type Jump Hook Shot vs Turnaround Jump S	0.456	0.162	1.285
action_type Jump Shot vs Turnaround Jump S	3.241	2.811	3.738
action_type Layup Shot vs Turnaround Jump S	1.932	1.603	2.330
action_type Pullup Bank shot vs Turnaround Jump S	1.146	0.344	3.817
action_type Pullup Jump shot vs Turnaround Jump S	0.605	0.466	0.784
action_type Putback Dunk Shot vs Turnaround Jump S	0.692	0.061	7.889
action_type Putback Layup Sho vs Turnaround Jump S	0.519	0.128	2.102
action_type Putback Slam Dunk vs Turnaround Jump S	1.274	0.079	20.481
action_type Reverse Dunk Shot vs Turnaround Jump S	0.110	0.044	0.280
action_type Reverse Layup Sho vs Turnaround Jump S	0.696	0.526	0.919
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.249	0.109	0.569
action_type Running Dunk Shot vs Turnaround Jump S	0.152	0.035	0.671
action_type Running Finger Ro vs Turnaround Jump S	1.520	0.403	5.735
action_type Running Hook Shot vs Turnaround Jump S	0.186	0.064	0.536
action_type Running Jump Shot vs Turnaround Jump S	0.463	0.374	0.574
action_type Running Layup Sho vs Turnaround Jump S	0.511	0.273	0.956
action_type Running Pull-Up J vs Turnaround Jump S	0.693	0.062	7.772
action_type Running Reverse L vs Turnaround Jump S	0.956	0.210	4.359
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.023	0.010	0.051
action_type Step Back Jump sh vs Turnaround Jump S	0.946	0.620	1.441
action_type Tip Layup Shot vs Turnaround Jump S	1.363	0.083	22.425
action_type Tip Shot vs Turnaround Jump S	2.304	1.584	3.350
action_type Turnaround Bank s vs Turnaround Jump S	0.330	0.172	0.634
action_type Turnaround Fadeaw vs Turnaround Jump S	1.038	0.809	1.333
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.401	0.344	5.706
seconds_remaining	0.997	0.995	0.998
shot_zone_area Back Court(BC) vs Right Side(R)	31.269	4.304	227.205

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
shot_zone_area Center(C) vs Right Side(R)	0.827	0.749	0.914
shot_zone_area Left Side Center(LC) vs Right Side(R)	0.908	0.811	1.016
shot_zone_area Left Side(L) vs Right Side(R)	1.080	0.975	1.197
shot_zone_area Right Side Center(RC) vs Right Side(R)	0.820	0.736	0.913
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.626	0.547	0.716
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.746	0.648	0.859
shot_zone_range 8-16 ft. vs Less Than 8 ft.	0.707	0.619	0.807
attendance	1.000	1.000	1.000
arena_temp	0.967	0.954	0.980

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.8	Somers' D	0.416
Percent Discordant	29.2	Gamma	0.416
Percent Tied	0.0	Tau-a	0.205
Pairs	163169880	c	0.708

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
77.3875	17	<.0001

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
combined_shot_type	0	.	.
period	6	23.3477	0.0007
minutes_remaining	1	16.6072	<.0001
playoffs	1	0.0871	0.7679
shot_distance	1	1.0723	0.3004
shot_type	1	0.9202	0.3374
shot_zone_basic	5	19.1799	0.0018
game_date	1	16.9069	<.0001
avgnoisedb	1	0.1148	0.7347

Step 7. Effect game_date entered:

The LOGISTIC Procedure

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	35327.083	31139.363
SC	35335.237	31661.228
-2 Log L	35325.083	31011.363

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	4313.7196	63	<.0001
Score	3982.3090	63	<.0001
Wald	2960.9198	63	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2282.9560	<.0001
seconds_remaining	1	19.1519	<.0001
shot_zone_area	5	48.9552	<.0001
shot_zone_range	3	52.9127	<.0001
game_date	1	16.8969	<.0001
attendance	1	188.8538	<.0001
arena_temp	1	26.2433	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

shot_zone_rangeBack Court Shot =	-0.04167 * Intercept + 1.04167 * shot_zone_aBack Court(BC) - 0.20833 * shot_zone_aCenter(C) - 0.20833 * shot_zone_aLeft Side Center(LC) - 0.20833 * shot_zone_aLeft Side(L) - 0.20833 * shot_zone_aRight Side Center(RC) + 0.25 * shot_zone_range16-24 ft. + 0.25 * shot_zone_range24+ ft. + 0.25 * shot_zone_range8-16 ft.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	3.4768	14.4225	0.0581	0.8095
action_type	**Alley Oop Dunk Sh**	1	-1.3421	14.4192	0.0087	0.9258
action_type	**Alley Oop Layup s**	1	0.6723	14.4146	0.0022	0.9628
action_type	**Cutting Layup Sho**	1	0.5826	14.4373	0.0016	0.9678

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Driving Bank shot	1	0.8264	14.4631	0.0033	0.9544
action_type	Driving Dunk Shot	1	-2.1609	14.4179	0.0225	0.8809
action_type	Driving Finger Ro	1	-0.3169	14.4145	0.0005	0.9825
action_type	Driving Floating	1	1.3883	14.4465	0.0092	0.9234
action_type	Driving Hook Shot	1	1.0265	14.4232	0.0051	0.9433
action_type	Driving Jump shot	1	1.8534	14.4182	0.0165	0.8977
action_type	Driving Layup Sho	1	0.5127	14.4123	0.0013	0.9716
action_type	Driving Reverse L	1	0.3667	14.4143	0.0006	0.9797
action_type	Driving Slam Dunk	1	-2.2612	14.4463	0.0245	0.8756
action_type	Dunk Shot	1	0.3267	14.4131	0.0005	0.9819
action_type	Fadeaway Bank sho	1	-0.4987	14.4248	0.0012	0.9724
action_type	Fadeaway Jump Sho	1	1.4251	14.4124	0.0098	0.9212
action_type	Finger Roll Layup	1	-0.0327	14.4204	0.0000	0.9982
action_type	Finger Roll Shot	1	1.7115	14.4174	0.0141	0.9055
action_type	Floating Jump sho	1	0.6249	14.4140	0.0019	0.9654
action_type	Follow Up Dunk Sh	1	-0.6868	14.4493	0.0023	0.9621
action_type	Hook Bank Shot	1	-10.6259	197.3	0.0029	0.9570
action_type	Hook Shot	1	2.1329	14.4142	0.0219	0.8824
action_type	Jump Bank Shot	1	0.3817	14.4129	0.0007	0.9789
action_type	Jump Hook Shot	1	0.5127	14.4213	0.0013	0.9716
action_type	Jump Shot	1	2.5348	14.4122	0.0309	0.8604
action_type	Layup Shot	1	2.0178	14.4122	0.0196	0.8887
action_type	Pullup Bank shot	1	1.4177	14.4246	0.0097	0.9217
action_type	Pullup Jump shot	1	0.7753	14.4126	0.0029	0.9571
action_type	Putback Dunk Shot	1	0.9513	14.4633	0.0043	0.9476
action_type	Putback Layup Sho	1	0.6533	14.4289	0.0021	0.9639
action_type	Putback Slam Dunk	1	1.5793	14.4787	0.0119	0.9131
action_type	Reverse Dunk Shot	1	-0.8343	14.4195	0.0033	0.9539
action_type	Reverse Layup Sho	1	0.9936	14.4126	0.0048	0.9450
action_type	Reverse Slam Dunk	1	-10.7061	114.6	0.0087	0.9256
action_type	Running Bank shot	1	-0.0839	14.4179	0.0000	0.9954
action_type	Running Dunk Shot	1	-0.5319	14.4310	0.0014	0.9706
action_type	Running Finger Ro	1	1.7525	14.4273	0.0148	0.9033
action_type	Running Hook Shot	1	-0.3421	14.4217	0.0006	0.9811
action_type	Running Jump Shot	1	0.6127	14.4124	0.0018	0.9661

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Running Layup Sho	1	0.6619	14.4153	0.0021	0.9634
action_type	Running Pull-Up J	1	0.8847	14.4627	0.0037	0.9512
action_type	Running Reverse L	1	1.2523	14.4319	0.0075	0.9309
action_type	Running Slam Dunk	1	-10.4578	442.5	0.0006	0.9811
action_type	Running Tip Shot	1	13.8155	441.9	0.0010	0.9751
action_type	Slam Dunk Shot	1	-2.3911	14.4178	0.0275	0.8683
action_type	Step Back Jump sh	1	1.2262	14.4136	0.0072	0.9322
action_type	Tip Layup Shot	1	1.5453	14.4799	0.0114	0.9150
action_type	Tip Shot	1	2.2250	14.4132	0.0238	0.8773
action_type	Turnaround Bank s	1	0.1900	14.4157	0.0002	0.9895
action_type	Turnaround Fadeaw	1	1.3172	14.4126	0.0084	0.9272
action_type	Turnaround Finger	1	-10.4361	312.8	0.0011	0.9734
action_type	Turnaround Hook S	1	1.6225	14.4291	0.0126	0.9105
seconds_remaining		1	-0.00343	0.000783	19.1519	<.0001
shot_zone_area	Back Court(BC)	1	2.9389	0.8424	12.1709	0.0005
shot_zone_area	Center(C)	1	-0.6975	0.1714	16.5654	<.0001
shot_zone_area	Left Side Center(LC)	1	-0.6037	0.1724	12.2647	0.0005
shot_zone_area	Left Side(L)	1	-0.4268	0.1725	6.1172	0.0134
shot_zone_area	Right Side Center(RC)	1	-0.7072	0.1719	16.9308	<.0001
shot_zone_range	16-24 ft.	1	-0.1889	0.0281	45.2048	<.0001
shot_zone_range	24+ ft.	1	-0.0295	0.0333	0.7846	0.3757
shot_zone_range	8-16 ft.	1	-0.0617	0.0325	3.6184	0.0571
shot_zone_range	Back Court Shot	0	0	.	.	.
game_date		1	0.000034	8.275E-6	16.8969	<.0001
attendance		1	-0.00018	0.000013	188.8538	<.0001
arena_temp		1	-0.0347	0.00677	26.2433	<.0001

Odds Ratio Estimates				
Effect		Point Estimate	95% Wald Confidence Limits	
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	0.069	0.027	0.172
action_type	Alley Oop Layup s vs Turnaround Jump S	0.515	0.295	0.901
action_type	Cutting Layup Sho vs Turnaround Jump S	0.471	0.085	2.608
action_type	Driving Bank shot vs Turnaround Jump S	0.601	0.053	6.824
action_type	Driving Dunk Shot vs Turnaround Jump S	0.030	0.013	0.069
action_type	Driving Finger Ro vs Turnaround Jump S	0.192	0.112	0.328

The LOGISTIC Procedure

Odds Ratio Estimates				
Effect		Point Estimate	95% Wald Confidence Limits	
action_type	Driving Floating vs Turnaround Jump S	1.055	0.144	7.750
action_type	Driving Hook Shot vs Turnaround Jump S	0.735	0.236	2.290
action_type	Driving Jump shot vs Turnaround Jump S	1.679	0.722	3.909
action_type	Driving Layup Sho vs Turnaround Jump S	0.439	0.360	0.537
action_type	Driving Reverse L vs Turnaround Jump S	0.380	0.225	0.642
action_type	Driving Slam Dunk vs Turnaround Jump S	0.027	0.004	0.201
action_type	Dunk Shot vs Turnaround Jump S	0.365	0.254	0.524
action_type	Fadeaway Bank sho vs Turnaround Jump S	0.160	0.048	0.537
action_type	Fadeaway Jump Sho vs Turnaround Jump S	1.094	0.903	1.326
action_type	Finger Roll Layup vs Turnaround Jump S	0.255	0.095	0.683
action_type	Finger Roll Shot vs Turnaround Jump S	1.457	0.660	3.217
action_type	Floating Jump sho vs Turnaround Jump S	0.492	0.304	0.794
action_type	Follow Up Dunk Sh vs Turnaround Jump S	0.132	0.017	1.055
action_type	Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type	Hook Shot vs Turnaround Jump S	2.221	1.344	3.671
action_type	Jump Bank Shot vs Turnaround Jump S	0.386	0.283	0.526
action_type	Jump Hook Shot vs Turnaround Jump S	0.439	0.156	1.240
action_type	Jump Shot vs Turnaround Jump S	3.320	2.877	3.831
action_type	Layup Shot vs Turnaround Jump S	1.980	1.641	2.388
action_type	Pullup Bank shot vs Turnaround Jump S	1.086	0.326	3.619
action_type	Pullup Jump shot vs Turnaround Jump S	0.571	0.440	0.742
action_type	Putback Dunk Shot vs Turnaround Jump S	0.681	0.060	7.779
action_type	Putback Layup Sho vs Turnaround Jump S	0.506	0.125	2.047
action_type	Putback Slam Dunk vs Turnaround Jump S	1.277	0.079	20.520
action_type	Reverse Dunk Shot vs Turnaround Jump S	0.114	0.045	0.290
action_type	Reverse Layup Sho vs Turnaround Jump S	0.711	0.538	0.940
action_type	Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type	Running Bank shot vs Turnaround Jump S	0.242	0.106	0.552
action_type	Running Dunk Shot vs Turnaround Jump S	0.155	0.035	0.682
action_type	Running Finger Ro vs Turnaround Jump S	1.518	0.402	5.732
action_type	Running Hook Shot vs Turnaround Jump S	0.187	0.065	0.539
action_type	Running Jump Shot vs Turnaround Jump S	0.486	0.391	0.603
action_type	Running Layup Sho vs Turnaround Jump S	0.510	0.272	0.955
action_type	Running Pull-Up J vs Turnaround Jump S	0.637	0.057	7.148
action_type	Running Reverse L vs Turnaround Jump S	0.921	0.202	4.198

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.024	0.011	0.055
action_type Step Back Jump sh vs Turnaround Jump S	0.897	0.588	1.368
action_type Tip Layup Shot vs Turnaround Jump S	1.234	0.075	20.316
action_type Tip Shot vs Turnaround Jump S	2.435	1.673	3.546
action_type Turnaround Bank s vs Turnaround Jump S	0.318	0.166	0.612
action_type Turnaround Fadeaw vs Turnaround Jump S	0.982	0.764	1.263
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.333	0.327	5.430
seconds_remaining	0.997	0.995	0.998
shot_zone_area Back Court(BC) vs Right Side(R)	31.267	4.306	227.020
shot_zone_area Center(C) vs Right Side(R)	0.824	0.746	0.910
shot_zone_area Left Side Center(LC) vs Right Side(R)	0.905	0.808	1.013
shot_zone_area Left Side(L) vs Right Side(R)	1.080	0.975	1.197
shot_zone_area Right Side Center(RC) vs Right Side(R)	0.816	0.732	0.909
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.626	0.547	0.716
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.734	0.637	0.845
shot_zone_range 8-16 ft. vs Less Than 8 ft.	0.710	0.622	0.811
game_date	1.000	1.000	1.000
attendance	1.000	1.000	1.000
arena_temp	0.966	0.953	0.979

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.8	Somers' D	0.417
Percent Discordant	29.2	Gamma	0.417
Percent Tied	0.0	Tau-a	0.206
Pairs	163169880	c	0.708

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
60.5824	16	<.0001

The LOGISTIC Procedure

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
combined_shot_type	0	.	.
period	6	25.1741	0.0003
minutes_remaining	1	16.0855	<.0001
playoffs	1	0.0097	0.9217
shot_distance	1	1.0245	0.3115
shot_type	1	0.3183	0.5727
shot_zone_basic	5	21.0476	0.0008
avgnoisedb	1	0.1334	0.7149

Step 8. Effect minutes_remaining entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	35327.083	31125.284
SC	35335.237	31655.303
-2 Log L	35325.083	30995.284

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	4329.7988	64	<.0001
Score	3996.0084	64	<.0001
Wald	2971.6000	64	<.0001

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
action_type	51	2286.6029	<.0001
minutes_remaining	1	16.0777	<.0001
seconds_remaining	1	18.7195	<.0001
shot_zone_area	5	48.4728	<.0001
shot_zone_range	3	50.0839	<.0001
game_date	1	16.3766	<.0001

The LOGISTIC Procedure

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
attendance	1	189.7549	<.0001
arena_temp	1	26.4602	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

shot_zone_rangeBack Court Shot =	-0.04167 * Intercept + 1.04167 * shot_zone_aBack Court(BC) - 0.20833 * shot_zone_aCenter(C) - 0.20833 * shot_zone_aLeft Side Center(LC) - 0.20833 * shot_zone_aLeft Side(L) - 0.20833 * shot_zone_aRight Side Center(RC) + 0.25 * shot_zone_range16-24 ft. + 0.25 * shot_zone_range24+ ft. + 0.25 * shot_zone_range8-16 ft.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	3.5652	14.4168	0.0612	0.8047
action_type	**Alley Oop Dunk Sh**	1	-1.3395	14.4135	0.0086	0.9260
action_type	**Alley Oop Layup s**	1	0.6864	14.4089	0.0023	0.9620
action_type	**Cutting Layup Sho**	1	0.5903	14.4316	0.0017	0.9674
action_type	**Driving Bank shot**	1	0.7871	14.4574	0.0030	0.9566
action_type	**Driving Dunk Shot**	1	-2.1614	14.4121	0.0225	0.8808
action_type	**Driving Finger Ro**	1	-0.3194	14.4087	0.0005	0.9823
action_type	**Driving Floating**	1	1.4122	14.4408	0.0096	0.9221
action_type	**Driving Hook Shot**	1	1.0476	14.4174	0.0053	0.9421
action_type	**Driving Jump shot**	1	1.8598	14.4124	0.0167	0.8973
action_type	**Driving Layup Sho**	1	0.5125	14.4065	0.0013	0.9716
action_type	**Driving Reverse L**	1	0.3616	14.4086	0.0006	0.9800
action_type	**Driving Slam Dunk**	1	-2.2768	14.4406	0.0249	0.8747
action_type	**Dunk Shot**	1	0.3320	14.4073	0.0005	0.9816
action_type	**Fadeaway Bank sho**	1	-0.5151	14.4190	0.0013	0.9715
action_type	**Fadeaway Jump Sho**	1	1.4265	14.4066	0.0098	0.9211
action_type	**Finger Roll Layup**	1	-0.0228	14.4146	0.0000	0.9987
action_type	**Finger Roll Shot**	1	1.7088	14.4116	0.0141	0.9056
action_type	**Floating Jump sho**	1	0.6361	14.4082	0.0019	0.9648
action_type	**Follow Up Dunk Sh**	1	-0.6915	14.4435	0.0023	0.9618
action_type	**Hook Bank Shot**	1	-10.6404	197.0	0.0029	0.9569
action_type	**Hook Shot**	1	2.1461	14.4084	0.0222	0.8816
action_type	**Jump Bank Shot**	1	0.3856	14.4071	0.0007	0.9786
action_type	**Jump Hook Shot**	1	0.5239	14.4155	0.0013	0.9710
action_type	**Jump Shot**	1	2.5388	14.4065	0.0311	0.8601

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Layup Shot	1	2.0200	14.4065	0.0197	0.8885
action_type	Pullup Bank shot	1	1.4044	14.4189	0.0095	0.9224
action_type	Pullup Jump shot	1	0.7769	14.4069	0.0029	0.9570
action_type	Putback Dunk Shot	1	0.9593	14.4574	0.0044	0.9471
action_type	Putback Layup Sho	1	0.6488	14.4232	0.0020	0.9641
action_type	Putback Slam Dunk	1	1.5666	14.4730	0.0117	0.9138
action_type	Reverse Dunk Shot	1	-0.8330	14.4137	0.0033	0.9539
action_type	Reverse Layup Sho	1	0.9998	14.4069	0.0048	0.9447
action_type	Reverse Slam Dunk	1	-10.7108	114.5	0.0087	0.9255
action_type	Running Bank shot	1	-0.0948	14.4122	0.0000	0.9948
action_type	Running Dunk Shot	1	-0.5465	14.4253	0.0014	0.9698
action_type	Running Finger Ro	1	1.7511	14.4216	0.0147	0.9034
action_type	Running Hook Shot	1	-0.3563	14.4160	0.0006	0.9803
action_type	Running Jump Shot	1	0.6093	14.4067	0.0018	0.9663
action_type	Running Layup Sho	1	0.6532	14.4096	0.0021	0.9638
action_type	Running Pull-Up J	1	0.9585	14.4568	0.0044	0.9471
action_type	Running Reverse L	1	1.2064	14.4262	0.0070	0.9334
action_type	Running Slam Dunk	1	-10.5312	442.5	0.0006	0.9810
action_type	Running Tip Shot	1	13.8669	441.9	0.0010	0.9750
action_type	Slam Dunk Shot	1	-2.3927	14.4121	0.0276	0.8681
action_type	Step Back Jump sh	1	1.2286	14.4079	0.0073	0.9320
action_type	Tip Layup Shot	1	1.5505	14.4742	0.0115	0.9147
action_type	Tip Shot	1	2.2213	14.4074	0.0238	0.8775
action_type	Turnaround Bank s	1	0.2005	14.4100	0.0002	0.9889
action_type	Turnaround Fadeaw	1	1.3181	14.4069	0.0084	0.9271
action_type	Turnaround Finger	1	-10.4370	312.3	0.0011	0.9733
action_type	Turnaround Hook S	1	1.6333	14.4234	0.0128	0.9098
minutes_remaining		1	-0.0160	0.00399	16.0777	<.0001
seconds_remaining		1	-0.00339	0.000783	18.7195	<.0001
shot_zone_area	Back Court(BC)	1	2.8745	0.8426	11.6385	0.0006
shot_zone_area	Center(C)	1	-0.6866	0.1714	16.0467	<.0001
shot_zone_area	Left Side Center(LC)	1	-0.5897	0.1724	11.6946	0.0006
shot_zone_area	Left Side(L)	1	-0.4138	0.1726	5.7496	0.0165
shot_zone_area	Right Side Center(RC)	1	-0.6927	0.1719	16.2356	<.0001
shot_zone_range	16-24 ft.	1	-0.1832	0.0281	42.3740	<.0001

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
shot_zone_range	24+ ft.	1	-0.0429	0.0335	1.6404	0.2003
shot_zone_range	8-16 ft.	1	-0.0569	0.0325	3.0676	0.0799
shot_zone_range	Back Court Shot	0	0	.	.	.
game_date		1	0.000034	8.278E-6	16.3766	<.0001
attendance		1	-0.00018	0.000013	189.7549	<.0001
arena_temp		1	-0.0348	0.00677	26.4602	<.0001

Odds Ratio Estimates				
Effect		Point Estimate	95% Wald Confidence Limits	
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	0.069	0.027	0.172
action_type	Alley Oop Layup s vs Turnaround Jump S	0.520	0.297	0.910
action_type	Cutting Layup Sho vs Turnaround Jump S	0.473	0.085	2.614
action_type	Driving Bank shot vs Turnaround Jump S	0.575	0.051	6.535
action_type	Driving Dunk Shot vs Turnaround Jump S	0.030	0.013	0.069
action_type	Driving Finger Ro vs Turnaround Jump S	0.190	0.111	0.326
action_type	Driving Floating vs Turnaround Jump S	1.075	0.146	7.902
action_type	Driving Hook Shot vs Turnaround Jump S	0.747	0.240	2.326
action_type	Driving Jump shot vs Turnaround Jump S	1.682	0.722	3.918
action_type	Driving Layup Sho vs Turnaround Jump S	0.437	0.358	0.534
action_type	Driving Reverse L vs Turnaround Jump S	0.376	0.222	0.635
action_type	Driving Slam Dunk vs Turnaround Jump S	0.027	0.004	0.197
action_type	Dunk Shot vs Turnaround Jump S	0.365	0.254	0.524
action_type	Fadeaway Bank sho vs Turnaround Jump S	0.156	0.047	0.526
action_type	Fadeaway Jump Sho vs Turnaround Jump S	1.090	0.900	1.321
action_type	Finger Roll Layup vs Turnaround Jump S	0.256	0.095	0.686
action_type	Finger Roll Shot vs Turnaround Jump S	1.446	0.655	3.192
action_type	Floating Jump sho vs Turnaround Jump S	0.495	0.306	0.799
action_type	Follow Up Dunk Sh vs Turnaround Jump S	0.131	0.016	1.044
action_type	Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type	Hook Shot vs Turnaround Jump S	2.239	1.354	3.703
action_type	Jump Bank Shot vs Turnaround Jump S	0.385	0.282	0.525
action_type	Jump Hook Shot vs Turnaround Jump S	0.442	0.157	1.248
action_type	Jump Shot vs Turnaround Jump S	3.317	2.874	3.827
action_type	Layup Shot vs Turnaround Jump S	1.974	1.637	2.381
action_type	Pullup Bank shot vs Turnaround Jump S	1.067	0.320	3.559

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Pullup Jump shot vs Turnaround Jump S	0.570	0.439	0.740
action_type Putback Dunk Shot vs Turnaround Jump S	0.683	0.060	7.768
action_type Putback Layup Sho vs Turnaround Jump S	0.501	0.124	2.030
action_type Putback Slam Dunk vs Turnaround Jump S	1.255	0.078	20.159
action_type Reverse Dunk Shot vs Turnaround Jump S	0.114	0.045	0.289
action_type Reverse Layup Sho vs Turnaround Jump S	0.712	0.538	0.941
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.238	0.104	0.544
action_type Running Dunk Shot vs Turnaround Jump S	0.152	0.034	0.669
action_type Running Finger Ro vs Turnaround Jump S	1.509	0.399	5.703
action_type Running Hook Shot vs Turnaround Jump S	0.183	0.064	0.529
action_type Running Jump Shot vs Turnaround Jump S	0.482	0.388	0.598
action_type Running Layup Sho vs Turnaround Jump S	0.503	0.269	0.943
action_type Running Pull-Up J vs Turnaround Jump S	0.683	0.061	7.631
action_type Running Reverse L vs Turnaround Jump S	0.875	0.192	3.992
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.024	0.010	0.055
action_type Step Back Jump sh vs Turnaround Jump S	0.895	0.586	1.365
action_type Tip Layup Shot vs Turnaround Jump S	1.234	0.075	20.322
action_type Tip Shot vs Turnaround Jump S	2.414	1.658	3.515
action_type Turnaround Bank s vs Turnaround Jump S	0.320	0.166	0.615
action_type Turnaround Fadeaw vs Turnaround Jump S	0.978	0.761	1.258
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.341	0.329	5.471
minutes_remaining	0.984	0.976	0.992
seconds_remaining	0.997	0.995	0.998
shot_zone_area Back Court(BC) vs Right Side(R)	28.968	3.988	210.424
shot_zone_area Center(C) vs Right Side(R)	0.823	0.745	0.909
shot_zone_area Left Side Center(LC) vs Right Side(R)	0.907	0.810	1.015
shot_zone_area Left Side(L) vs Right Side(R)	1.081	0.976	1.198
shot_zone_area Right Side Center(RC) vs Right Side(R)	0.818	0.734	0.911
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.627	0.548	0.718
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.722	0.627	0.831
shot_zone_range 8-16 ft. vs Less Than 8 ft.	0.712	0.624	0.813

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
game_date	1.000	1.000	1.000
attendance	1.000	1.000	1.000
arena_temp	0.966	0.953	0.979

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.9	**Somers' D**	0.419
Percent Discordant	29.1	**Gamma**	0.419
Percent Tied	0.0	**Tau-a**	0.207
Pairs	163169880	**c**	0.709

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
44.5146	15	<.0001

Analysis of Effects Eligible for Entry			
Effect	**DF**	**Score Chi-Square**	**Pr > ChiSq**
combined_shot_type	0	.	.
period	6	23.1791	0.0007
playoffs	1	0.0045	0.9463
shot_distance	1	0.7923	0.3734
shot_type	1	0.3345	0.5630
shot_zone_basic	5	20.6974	0.0009
avgnoisedb	1	0.1314	0.7170

Step 9. Effect period entered:

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

The LOGISTIC Procedure

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	35327.083	31114.046
SC	35335.237	31692.989
-2 Log L	35325.083	30972.046

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	4353.0369	70	<.0001
Score	4015.5932	70	<.0001
Wald	2986.8401	70	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2290.6008	<.0001
period	6	23.1601	0.0007
minutes_remaining	1	14.0775	0.0002
seconds_remaining	1	19.1489	<.0001
shot_zone_area	5	48.0663	<.0001
shot_zone_range	3	49.7832	<.0001
game_date	1	17.9974	<.0001
attendance	1	187.5781	<.0001
arena_temp	1	26.5713	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

shot_zone_rangeBack Court Shot =	-0.04167 * Intercept + 1.04167 * shot_zone_aBack Court(BC) - 0.20833 * shot_zone_aCenter(C) - 0.20833 * shot_zone_aLeft Side Center(LC) - 0.20833 * shot_zone_aLeft Side(L) - 0.20833 * shot_zone_aRight Side Center(RC) + 0.25 * shot_zone_range16-24 ft. + 0.25 * shot_zone_range24+ ft. + 0.25 * shot_zone_range8-16 ft.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	3.5710	14.4191	0.0613	0.8044
action_type	**Alley Oop Dunk Sh**	1	-1.3448	14.4151	0.0087	0.9257
action_type	**Alley Oop Layup s**	1	0.6754	14.4105	0.0022	0.9626
action_type	**Cutting Layup Sho**	1	0.5780	14.4333	0.0016	0.9681
action_type	**Driving Bank shot**	1	0.7867	14.4595	0.0030	0.9566

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Driving Dunk Shot	1	-2.1669	14.4137	0.0226	0.8805
action_type	Driving Finger Ro	1	-0.3188	14.4103	0.0005	0.9824
action_type	Driving Floating	1	1.3653	14.4427	0.0089	0.9247
action_type	Driving Hook Shot	1	1.0335	14.4190	0.0051	0.9429
action_type	Driving Jump shot	1	1.8403	14.4140	0.0163	0.8984
action_type	Driving Layup Sho	1	0.5087	14.4081	0.0012	0.9718
action_type	Driving Reverse L	1	0.3629	14.4102	0.0006	0.9799
action_type	Driving Slam Dunk	1	-2.2814	14.4422	0.0250	0.8745
action_type	Dunk Shot	1	0.3263	14.4089	0.0005	0.9819
action_type	Fadeaway Bank sho	1	-0.5203	14.4206	0.0013	0.9712
action_type	Fadeaway Jump Sho	1	1.4182	14.4082	0.0097	0.9216
action_type	Finger Roll Layup	1	-0.00456	14.4162	0.0000	0.9997
action_type	Finger Roll Shot	1	1.6974	14.4132	0.0139	0.9063
action_type	Floating Jump sho	1	0.6311	14.4098	0.0019	0.9651
action_type	Follow Up Dunk Sh	1	-0.6779	14.4451	0.0022	0.9626
action_type	Hook Bank Shot	1	-10.5997	197.2	0.0029	0.9571
action_type	Hook Shot	1	2.1592	14.4100	0.0225	0.8809
action_type	Jump Bank Shot	1	0.3873	14.4087	0.0007	0.9786
action_type	Jump Hook Shot	1	0.5287	14.4172	0.0013	0.9707
action_type	Jump Shot	1	2.5389	14.4081	0.0311	0.8601
action_type	Layup Shot	1	2.0170	14.4081	0.0196	0.8887
action_type	Pullup Bank shot	1	1.4046	14.4205	0.0095	0.9224
action_type	Pullup Jump shot	1	0.7705	14.4085	0.0029	0.9574
action_type	Putback Dunk Shot	1	0.9484	14.4589	0.0043	0.9477
action_type	Putback Layup Sho	1	0.6464	14.4248	0.0020	0.9643
action_type	Putback Slam Dunk	1	1.5868	14.4746	0.0120	0.9127
action_type	Reverse Dunk Shot	1	-0.8372	14.4153	0.0034	0.9537
action_type	Reverse Layup Sho	1	1.0061	14.4084	0.0049	0.9443
action_type	Reverse Slam Dunk	1	-10.7094	114.7	0.0087	0.9256
action_type	Running Bank shot	1	-0.1120	14.4138	0.0001	0.9938
action_type	Running Dunk Shot	1	-0.5544	14.4269	0.0015	0.9693
action_type	Running Finger Ro	1	1.7624	14.4231	0.0149	0.9027
action_type	Running Hook Shot	1	-0.3712	14.4175	0.0007	0.9795
action_type	Running Jump Shot	1	0.6038	14.4082	0.0018	0.9666
action_type	Running Layup Sho	1	0.6556	14.4112	0.0021	0.9637

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Running Pull-Up J	1	0.9949	14.4583	0.0047	0.9451
action_type	Running Reverse L	1	1.1964	14.4278	0.0069	0.9339
action_type	Running Slam Dunk	1	-10.5506	442.5	0.0006	0.9810
action_type	Running Tip Shot	1	13.8668	441.9	0.0010	0.9750
action_type	Slam Dunk Shot	1	-2.3957	14.4137	0.0276	0.8680
action_type	Step Back Jump sh	1	1.2136	14.4094	0.0071	0.9329
action_type	Tip Layup Shot	1	1.5554	14.4757	0.0115	0.9144
action_type	Tip Shot	1	2.2169	14.4090	0.0237	0.8777
action_type	Turnaround Bank s	1	0.2092	14.4116	0.0002	0.9884
action_type	Turnaround Fadeaw	1	1.3131	14.4084	0.0083	0.9274
action_type	Turnaround Finger	1	-10.3697	312.4	0.0011	0.9735
action_type	Turnaround Hook S	1	1.6691	14.4250	0.0134	0.9079
period	1	1	-0.1078	0.1343	0.6440	0.4223
period	2	1	-0.0604	0.1346	0.2012	0.6537
period	3	1	-0.0421	0.1343	0.0983	0.7538
period	4	1	0.0746	0.1345	0.3077	0.5791
period	5	1	-0.0236	0.1734	0.0186	0.8915
period	6	1	0.1724	0.3715	0.2153	0.6426
minutes_remaining		1	-0.0152	0.00405	14.0775	0.0002
seconds_remaining		1	-0.00343	0.000784	19.1489	<.0001
shot_zone_area	Back Court(BC)	1	2.9086	0.8428	11.9098	0.0006
shot_zone_area	Center(C)	1	-0.6959	0.1714	16.4756	<.0001
shot_zone_area	Left Side Center(LC)	1	-0.5942	0.1725	11.8660	0.0006
shot_zone_area	Left Side(L)	1	-0.4244	0.1726	6.0429	0.0140
shot_zone_area	Right Side Center(RC)	1	-0.6958	0.1720	16.3739	<.0001
shot_zone_range	16-24 ft.	1	-0.1822	0.0282	41.8642	<.0001
shot_zone_range	24+ ft.	1	-0.0570	0.0336	2.8688	0.0903
shot_zone_range	8-16 ft.	1	-0.0506	0.0325	2.4181	0.1199
shot_zone_range	Back Court Shot	0	0	.	.	.
game_date		1	0.000035	8.298E-6	17.9974	<.0001
attendance		1	-0.00018	0.000013	187.5781	<.0001
arena_temp		1	-0.0349	0.00677	26.5713	<.0001

The LOGISTIC Procedure

Odds Ratio Estimates				
Effect		Point Estimate	95% Wald Confidence Limits	
action_type	Alley Oop Dunk Sh vs Turnaround Jump S	0.068	0.027	0.171
action_type	Alley Oop Layup s vs Turnaround Jump S	0.515	0.294	0.900
action_type	Cutting Layup Sho vs Turnaround Jump S	0.467	0.084	2.592
action_type	Driving Bank shot vs Turnaround Jump S	0.575	0.050	6.621
action_type	Driving Dunk Shot vs Turnaround Jump S	0.030	0.013	0.069
action_type	Driving Finger Ro vs Turnaround Jump S	0.190	0.111	0.326
action_type	Driving Floating vs Turnaround Jump S	1.026	0.138	7.617
action_type	Driving Hook Shot vs Turnaround Jump S	0.736	0.236	2.297
action_type	Driving Jump shot vs Turnaround Jump S	1.650	0.707	3.849
action_type	Driving Layup Sho vs Turnaround Jump S	0.436	0.357	0.532
action_type	Driving Reverse L vs Turnaround Jump S	0.377	0.223	0.637
action_type	Driving Slam Dunk vs Turnaround Jump S	0.027	0.004	0.196
action_type	Dunk Shot vs Turnaround Jump S	0.363	0.253	0.522
action_type	Fadeaway Bank sho vs Turnaround Jump S	0.156	0.046	0.524
action_type	Fadeaway Jump Sho vs Turnaround Jump S	1.082	0.893	1.311
action_type	Finger Roll Layup vs Turnaround Jump S	0.261	0.097	0.699
action_type	Finger Roll Shot vs Turnaround Jump S	1.430	0.648	3.158
action_type	Floating Jump sho vs Turnaround Jump S	0.492	0.305	0.796
action_type	Follow Up Dunk Sh vs Turnaround Jump S	0.133	0.017	1.059
action_type	Hook Bank Shot vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type	Hook Shot vs Turnaround Jump S	2.270	1.372	3.754
action_type	Jump Bank Shot vs Turnaround Jump S	0.386	0.283	0.526
action_type	Jump Hook Shot vs Turnaround Jump S	0.444	0.157	1.256
action_type	Jump Shot vs Turnaround Jump S	3.318	2.875	3.829
action_type	Layup Shot vs Turnaround Jump S	1.969	1.632	2.375
action_type	Pullup Bank shot vs Turnaround Jump S	1.067	0.320	3.559
action_type	Pullup Jump shot vs Turnaround Jump S	0.566	0.436	0.735
action_type	Putback Dunk Shot vs Turnaround Jump S	0.676	0.060	7.661
action_type	Putback Layup Sho vs Turnaround Jump S	0.500	0.123	2.029
action_type	Putback Slam Dunk vs Turnaround Jump S	1.280	0.080	20.586
action_type	Reverse Dunk Shot vs Turnaround Jump S	0.113	0.045	0.288
action_type	Reverse Layup Sho vs Turnaround Jump S	0.716	0.542	0.947
action_type	Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type	Running Bank shot vs Turnaround Jump S	0.234	0.102	0.535
action_type	Running Dunk Shot vs Turnaround Jump S	0.150	0.034	0.665

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
action_type Running Finger Ro vs Turnaround Jump S	1.526	0.404	5.769
action_type Running Hook Shot vs Turnaround Jump S	0.181	0.063	0.521
action_type Running Jump Shot vs Turnaround Jump S	0.479	0.386	0.595
action_type Running Layup Sho vs Turnaround Jump S	0.505	0.269	0.947
action_type Running Pull-Up J vs Turnaround Jump S	0.708	0.063	7.904
action_type Running Reverse L vs Turnaround Jump S	0.867	0.190	3.958
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.024	0.010	0.054
action_type Step Back Jump sh vs Turnaround Jump S	0.882	0.578	1.345
action_type Tip Layup Shot vs Turnaround Jump S	1.241	0.075	20.397
action_type Tip Shot vs Turnaround Jump S	2.404	1.650	3.502
action_type Turnaround Bank s vs Turnaround Jump S	0.323	0.168	0.621
action_type Turnaround Fadeaw vs Turnaround Jump S	0.974	0.758	1.252
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.390	0.341	5.666
period 1 vs 7	0.910	0.183	4.515
period 2 vs 7	0.954	0.192	4.735
period 3 vs 7	0.971	0.196	4.822
period 4 vs 7	1.092	0.220	5.419
period 5 vs 7	0.989	0.195	5.009
period 6 vs 7	1.204	0.201	7.226
minutes_remaining	0.985	0.977	0.993
seconds_remaining	0.997	0.995	0.998
shot_zone_area Back Court(BC) vs Right Side(R)	30.170	4.151	219.264
shot_zone_area Center(C) vs Right Side(R)	0.821	0.743	0.907
shot_zone_area Left Side Center(LC) vs Right Side(R)	0.909	0.812	1.017
shot_zone_area Left Side(L) vs Right Side(R)	1.077	0.972	1.193
shot_zone_area Right Side Center(RC) vs Right Side(R)	0.821	0.737	0.914
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.624	0.545	0.714
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.707	0.614	0.815
shot_zone_range 8-16 ft. vs Less Than 8 ft.	0.712	0.623	0.812
game_date	1.000	1.000	1.000
attendance	1.000	1.000	1.000
arena_temp	0.966	0.953	0.979

The LOGISTIC Procedure

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	71.1	**Somers' D**	0.422
Percent Discordant	28.9	**Gamma**	0.422
Percent Tied	0.0	**Tau-a**	0.208
Pairs	163169880	**c**	0.711

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
21.3583	9	0.0112

Analysis of Effects Eligible for Entry			
Effect	**DF**	**Score Chi-Square**	**Pr > ChiSq**
combined_shot_type	0	.	.
playoffs	1	0.0104	0.9188
shot_distance	1	0.7325	0.3921
shot_type	1	0.4404	0.5069
shot_zone_basic	5	20.7110	0.0009
avgnoisedb	1	0.0879	0.7668

Step 10. Effect shot_zone_basic entered:

Model Convergence Status
Quasi-complete separation of data points detected.

Warning: The maximum likelihood estimate may not exist.

Warning: The LOGISTIC procedure continues in spite of the above warning. Results shown are based on the last maximum likelihood iteration. Validity of the model fit is questionable.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	35327.083	31103.802
SC	35335.237	31723.516
-2 Log L	35325.083	30951.802

The LOGISTIC Procedure

Warning: The validity of the model fit is questionable.

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	4373.2810	75	<.0001
Score	4032.9767	75	<.0001
Wald	2998.6343	75	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	51	2206.7239	<.0001
period	6	23.1797	0.0007
minutes_remaining	1	13.7986	0.0002
seconds_remaining	1	18.8664	<.0001
shot_zone_area	5	36.6999	<.0001
shot_zone_basic	6	22.5584	0.0010
shot_zone_range	2	42.0992	<.0001
game_date	1	19.8546	<.0001
attendance	1	188.4634	<.0001
arena_temp	1	26.1973	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

shot_zone_range8-16 ft. =	-0.78571 * Intercept + 2.5 * shot_zone_aBack Court(BC) - 0.5 * shot_zone_aCenter(C) - 0.5 * shot_zone_aLeft Side Center(LC) - 0.5 * shot_zone_aLeft Side(L) - 0.5 * shot_zone_aRight Side Center(RC) - 1.71429 * shot_zone_bAbove the Break 3 - 1.71429 * shot_zone_bBackcourt + 2.28571 * shot_zone_bIn The Paint (Non-RA) - 1.71429 * shot_zone_bLeft Corner 3 + 2.28571 * shot_zone_bMid-Range + 2.28571 * shot_zone_bRestricted Area - shot_zone_range16-24 ft. + 3 * shot_zone_range24+ ft.
shot_zone_rangeBack Court Shot =	- 0.2381 * Intercept + 1.66667 * shot_zone_aBack Court(BC) - 0.33333 * shot_zone_aCenter(C) - 0.33333 * shot_zone_aLeft Side Center(LC) - 0.33333 * shot_zone_aLeft Side(L) - 0.33333 * shot_zone_aRight Side Center(RC) - 0.42857 * shot_zone_bAbove the Break 3 - 0.42857 * shot_zone_bBackcourt + 0.57143 * shot_zone_bIn The Paint (Non-RA) - 0.42857 * shot_zone_bLeft Corner 3 + 0.57143 * shot_zone_bMid-Range + 0.57143 * shot_zone_bRestricted Area + shot_zone_range24+ ft.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	3.7186	14.7329	0.0637	0.8007
action_type	**Alley Oop Dunk Sh**	1	-1.2667	14.4140	0.0077	0.9300
action_type	**Alley Oop Layup s**	1	0.7523	14.4094	0.0027	0.9584
action_type	**Cutting Layup Sho**	1	0.6506	14.4322	0.0020	0.9640
action_type	**Driving Bank shot**	1	0.7338	14.4586	0.0026	0.9595
action_type	**Driving Dunk Shot**	1	-2.0869	14.4126	0.0210	0.8849
action_type	**Driving Finger Ro**	1	-0.2502	14.4092	0.0003	0.9861

The LOGISTIC Procedure

Warning: The validity of the model fit is questionable.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
action_type	**Driving Floating**	1	1.2572	14.4417	0.0076	0.9306
action_type	**Driving Hook Shot**	1	0.9857	14.4179	0.0047	0.9455
action_type	**Driving Jump shot**	1	1.7863	14.4129	0.0154	0.9014
action_type	**Driving Layup Sho**	1	0.5856	14.4070	0.0017	0.9676
action_type	**Driving Reverse L**	1	0.4387	14.4091	0.0009	0.9757
action_type	**Driving Slam Dunk**	1	-2.2043	14.4411	0.0233	0.8787
action_type	**Dunk Shot**	1	0.4057	14.4078	0.0008	0.9775
action_type	**Fadeaway Bank sho**	1	-0.6363	14.4196	0.0019	0.9648
action_type	**Fadeaway Jump Sho**	1	1.3176	14.4072	0.0084	0.9271
action_type	**Finger Roll Layup**	1	0.0427	14.4151	0.0000	0.9976
action_type	**Finger Roll Shot**	1	1.7217	14.4121	0.0143	0.9049
action_type	**Floating Jump sho**	1	0.5425	14.4088	0.0014	0.9700
action_type	**Follow Up Dunk Sh**	1	-0.5965	14.4440	0.0017	0.9671
action_type	**Hook Bank Shot**	1	-10.7030	197.0	0.0030	0.9567
action_type	**Hook Shot**	1	2.0952	14.4089	0.0211	0.8844
action_type	**Jump Bank Shot**	1	0.2741	14.4077	0.0004	0.9848
action_type	**Jump Hook Shot**	1	0.4696	14.4160	0.0011	0.9740
action_type	**Jump Shot**	1	2.4466	14.4070	0.0288	0.8652
action_type	**Layup Shot**	1	2.0958	14.4070	0.0212	0.8843
action_type	**Pullup Bank shot**	1	1.2913	14.4195	0.0080	0.9286
action_type	**Pullup Jump shot**	1	0.6719	14.4074	0.0022	0.9628
action_type	**Putback Dunk Shot**	1	1.0260	14.4578	0.0050	0.9434
action_type	**Putback Layup Sho**	1	0.7234	14.4237	0.0025	0.9600
action_type	**Putback Slam Dunk**	1	1.6647	14.4735	0.0132	0.9084
action_type	**Reverse Dunk Shot**	1	-0.7569	14.4142	0.0028	0.9581
action_type	**Reverse Layup Sho**	1	1.0844	14.4073	0.0057	0.9400
action_type	**Reverse Slam Dunk**	1	-10.6332	114.7	0.0086	0.9261
action_type	**Running Bank shot**	1	-0.2078	14.4127	0.0002	0.9885
action_type	**Running Dunk Shot**	1	-0.4751	14.4258	0.0011	0.9737
action_type	**Running Finger Ro**	1	1.8065	14.4220	0.0157	0.9003
action_type	**Running Hook Shot**	1	-0.4551	14.4165	0.0010	0.9748
action_type	**Running Jump Shot**	1	0.5140	14.4072	0.0013	0.9715
action_type	**Running Layup Sho**	1	0.7189	14.4101	0.0025	0.9602
action_type	**Running Pull-Up J**	1	0.8701	14.4573	0.0036	0.9520

The LOGISTIC Procedure

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Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
action_type	Running Reverse L	1	1.2741	14.4267	0.0078	0.9296
action_type	Running Slam Dunk	1	-10.4737	442.5	0.0006	0.9811
action_type	Running Tip Shot	1	13.9449	441.9	0.0010	0.9748
action_type	Slam Dunk Shot	1	-2.3141	14.4126	0.0258	0.8724
action_type	Step Back Jump sh	1	1.1143	14.4084	0.0060	0.9384
action_type	Tip Layup Shot	1	1.6274	14.4746	0.0126	0.9105
action_type	Tip Shot	1	2.2985	14.4079	0.0255	0.8733
action_type	Turnaround Bank s	1	0.0874	14.4105	0.0000	0.9952
action_type	Turnaround Fadeaw	1	1.2102	14.4074	0.0071	0.9331
action_type	Turnaround Finger	1	-10.2887	312.4	0.0011	0.9737
action_type	Turnaround Hook S	1	1.5760	14.4240	0.0119	0.9130
period	1	1	-0.1045	0.1343	0.6057	0.4364
period	2	1	-0.0567	0.1345	0.1777	0.6734
period	3	1	-0.0379	0.1343	0.0799	0.7775
period	4	1	0.0782	0.1345	0.3385	0.5607
period	5	1	-0.0204	0.1734	0.0138	0.9064
period	6	1	0.1700	0.3708	0.2101	0.6467
minutes_remaining		1	-0.0150	0.00405	13.7986	0.0002
seconds_remaining		1	-0.00341	0.000784	18.8664	<.0001
shot_zone_area	Back Court(BC)	1	9.4226	106.1	0.0079	0.9292
shot_zone_area	Center(C)	1	-1.9895	21.2194	0.0088	0.9253
shot_zone_area	Left Side Center(LC)	1	-1.9311	21.2194	0.0083	0.9275
shot_zone_area	Left Side(L)	1	-1.6881	21.2195	0.0063	0.9366
shot_zone_area	Right Side Center(RC)	1	-2.0308	21.2194	0.0092	0.9238
shot_zone_basic	Above the Break 3	1	1.5021	18.1888	0.0068	0.9342
shot_zone_basic	Backcourt	1	-6.8411	109.1	0.0039	0.9500
shot_zone_basic	In The Paint (Non-RA)	1	1.0751	18.1888	0.0035	0.9529
shot_zone_basic	Left Corner 3	1	0.9640	18.1891	0.0028	0.9577
shot_zone_basic	Mid-Range	1	1.1631	18.1888	0.0041	0.9490
shot_zone_basic	Restricted Area	1	0.8793	18.1892	0.0023	0.9614
shot_zone_range	16-24 ft.	1	-0.1346	0.0534	6.3592	0.0117
shot_zone_range	24+ ft.	1	-0.2978	0.0953	9.7558	0.0018
shot_zone_range	8-16 ft.	0	0	.	.	.
shot_zone_range	Back Court Shot	0	0	.	.	.

The LOGISTIC Procedure

Warning: The validity of the model fit is questionable.

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
game_date		1	0.000037	8.32E-6	19.8546	<.0001
attendance		1	-0.00018	0.000013	188.4634	<.0001
arena_temp		1	-0.0347	0.00678	26.1973	<.0001

Odds Ratio Estimates				
Effect		**Point Estimate**	**95% Wald Confidence Limits**	
action_type	**Alley Oop Dunk Sh vs Turnaround Jump S**	0.081	0.032	0.209
action_type	**Alley Oop Layup s vs Turnaround Jump S**	0.612	0.335	1.118
action_type	**Cutting Layup Sho vs Turnaround Jump S**	0.553	0.098	3.115
action_type	**Driving Bank shot vs Turnaround Jump S**	0.601	0.052	6.953
action_type	**Driving Dunk Shot vs Turnaround Jump S**	0.036	0.015	0.084
action_type	**Driving Finger Ro vs Turnaround Jump S**	0.225	0.126	0.401
action_type	**Driving Floating vs Turnaround Jump S**	1.014	0.137	7.533
action_type	**Driving Hook Shot vs Turnaround Jump S**	0.773	0.246	2.425
action_type	**Driving Jump shot vs Turnaround Jump S**	1.722	0.736	4.026
action_type	**Driving Layup Sho vs Turnaround Jump S**	0.518	0.384	0.699
action_type	**Driving Reverse L vs Turnaround Jump S**	0.447	0.253	0.792
action_type	**Driving Slam Dunk vs Turnaround Jump S**	0.032	0.004	0.236
action_type	**Dunk Shot vs Turnaround Jump S**	0.433	0.282	0.664
action_type	**Fadeaway Bank sho vs Turnaround Jump S**	0.153	0.045	0.514
action_type	**Fadeaway Jump Sho vs Turnaround Jump S**	1.078	0.889	1.306
action_type	**Finger Roll Layup vs Turnaround Jump S**	0.301	0.110	0.822
action_type	**Finger Roll Shot vs Turnaround Jump S**	1.614	0.720	3.617
action_type	**Floating Jump sho vs Turnaround Jump S**	0.496	0.307	0.803
action_type	**Follow Up Dunk Sh vs Turnaround Jump S**	0.159	0.020	1.281
action_type	**Hook Bank Shot vs Turnaround Jump S**	<0.001	<0.001	>999.999
action_type	**Hook Shot vs Turnaround Jump S**	2.345	1.415	3.886
action_type	**Jump Bank Shot vs Turnaround Jump S**	0.380	0.278	0.518
action_type	**Jump Hook Shot vs Turnaround Jump S**	0.461	0.163	1.303
action_type	**Jump Shot vs Turnaround Jump S**	3.332	2.887	3.846
action_type	**Layup Shot vs Turnaround Jump S**	2.346	1.750	3.146
action_type	**Pullup Bank shot vs Turnaround Jump S**	1.050	0.314	3.505
action_type	**Pullup Jump shot vs Turnaround Jump S**	0.565	0.435	0.734
action_type	**Putback Dunk Shot vs Turnaround Jump S**	0.805	0.070	9.217

The LOGISTIC Procedure

Warning: The validity of the model fit is questionable.

Odds Ratio Estimates			
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
action_type Putback Layup Sho vs Turnaround Jump S	0.595	0.144	2.458
action_type Putback Slam Dunk vs Turnaround Jump S	1.525	0.094	24.738
action_type Reverse Dunk Shot vs Turnaround Jump S	0.135	0.052	0.353
action_type Reverse Layup Sho vs Turnaround Jump S	0.853	0.596	1.222
action_type Reverse Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Bank shot vs Turnaround Jump S	0.234	0.103	0.536
action_type Running Dunk Shot vs Turnaround Jump S	0.179	0.040	0.806
action_type Running Finger Ro vs Turnaround Jump S	1.757	0.460	6.716
action_type Running Hook Shot vs Turnaround Jump S	0.183	0.063	0.528
action_type Running Jump Shot vs Turnaround Jump S	0.482	0.388	0.599
action_type Running Layup Sho vs Turnaround Jump S	0.592	0.306	1.148
action_type Running Pull-Up J vs Turnaround Jump S	0.689	0.062	7.686
action_type Running Reverse L vs Turnaround Jump S	1.032	0.222	4.791
action_type Running Slam Dunk vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Running Tip Shot vs Turnaround Jump S	>999.999	<0.001	>999.999
action_type Slam Dunk Shot vs Turnaround Jump S	0.029	0.012	0.067
action_type Step Back Jump sh vs Turnaround Jump S	0.879	0.576	1.342
action_type Tip Layup Shot vs Turnaround Jump S	1.469	0.089	24.360
action_type Tip Shot vs Turnaround Jump S	2.874	1.852	4.459
action_type Turnaround Bank s vs Turnaround Jump S	0.315	0.164	0.606
action_type Turnaround Fadeaw vs Turnaround Jump S	0.968	0.753	1.244
action_type Turnaround Finger vs Turnaround Jump S	<0.001	<0.001	>999.999
action_type Turnaround Hook S vs Turnaround Jump S	1.395	0.342	5.694
period 1 vs 7	0.927	0.187	4.602
period 2 vs 7	0.972	0.196	4.828
period 3 vs 7	0.991	0.200	4.918
period 4 vs 7	1.113	0.224	5.525
period 5 vs 7	1.008	0.199	5.104
period 6 vs 7	1.220	0.203	7.315
minutes_remaining	0.985	0.977	0.993
seconds_remaining	0.997	0.995	0.998
shot_zone_area Back Court(BC) vs Right Side(R)	>999.999	<0.001	>999.999
shot_zone_area Center(C) vs Right Side(R)	0.814	0.727	0.911
shot_zone_area Left Side Center(LC) vs Right Side(R)	0.862	0.763	0.975

The LOGISTIC Procedure

Warning: The validity of the model fit is questionable.

Odds Ratio Estimates			
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
shot_zone_area Left Side(L) vs Right Side(R)	1.100	0.988	1.224
shot_zone_area Right Side Center(RC) vs Right Side(R)	0.781	0.694	0.879
shot_zone_basic Above the Break 3 vs Right Corner 3	1.277	0.986	1.655
shot_zone_basic Backcourt vs Right Corner 3	<0.001	<0.001	>999.999
shot_zone_basic In The Paint (Non-RA) vs Right Corner 3	0.833	0.595	1.168
shot_zone_basic Left Corner 3 vs Right Corner 3	0.746	0.517	1.076
shot_zone_basic Mid-Range vs Right Corner 3	0.910	0.657	1.260
shot_zone_basic Restricted Area vs Right Corner 3	0.685	0.440	1.066
shot_zone_range 16-24 ft. vs Less Than 8 ft.	0.567	0.477	0.675
shot_zone_range 24+ ft. vs Less Than 8 ft.	0.482	0.350	0.663
game_date	1.000	1.000	1.000
attendance	1.000	1.000	1.000
arena_temp	0.966	0.953	0.979

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	71.2	**Somers' D**	0.423
Percent Discordant	28.8	**Gamma**	0.423
Percent Tied	0.0	**Tau-a**	0.209
Pairs	163169880	**c**	0.712

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
0.6475	4	0.9576

Analysis of Effects Eligible for Entry			
Effect	**DF**	**Score Chi-Square**	**Pr > ChiSq**
combined_shot_type	0	.	.
playoffs	1	0.0198	0.8880
shot_distance	1	0.1976	0.6567
shot_type	1	0.3523	0.5528
avgnoisedb	1	0.1343	0.7140

Note: No (additional) effects met the 0.35 significance level for entry into the model.

The LOGISTIC Procedure

Warning: The validity of the model fit is questionable.

Summary of Forward Selection

Step	Effect Entered	DF	Number In	Score Chi-Square	Pr > ChiSq
1	**action_type**	51	1	3641.0049	<.0001
2	**attendance**	1	2	213.2263	<.0001
3	**shot_zone_range**	4	3	84.0423	<.0001
4	**shot_zone_area**	4	4	36.1015	<.0001
5	**arena_temp**	1	5	25.2151	<.0001
6	**seconds_remaining**	1	6	18.6831	<.0001
7	**game_date**	1	7	16.9069	<.0001
8	**minutes_remaining**	1	8	16.0855	<.0001
9	**period**	6	9	23.1791	0.0007
10	**shot_zone_basic**	5	10	20.7110	0.0009

Partition for the Hosmer and Lemeshow Test

		shot_made_flag = 0		shot_made_flag = 1	
Group	Total	Observed	Expected	Observed	Expected
1	2570	355	362.26	2215	2207.74
2	2570	744	736.22	1826	1833.78
3	2570	1098	1107.24	1472	1462.76
4	2570	1492	1465.61	1078	1104.39
5	2570	1568	1581.89	1002	988.11
6	2570	1633	1655.53	937	914.47
7	2570	1720	1719.50	850	850.50
8	2570	1805	1780.84	765	789.16
9	2570	1868	1849.30	702	720.70
10	2567	1949	1973.60	618	593.40

Hosmer and Lemeshow Goodness-of-Fit Test

Chi-Square	DF	Pr > ChiSq
5.7739	8	0.6725