



# The Future of Lighting

**Jeremy Vickery**

Assistant Art Director Ubisoft Quebec

1977



film



games

# 2015



film



games

# SIMPLEXITY



4

0

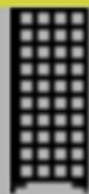
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MENU





|||||  
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RPM

145

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MPH 01

00'01'29 0000



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TIME 80

SCORE

80

LAP

0'00"64



# START



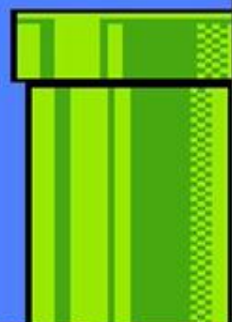
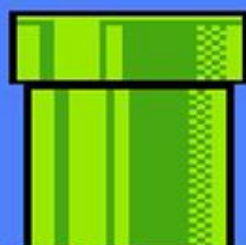
RECOGNITION.... STORY..... BELIEVABILITY..... IMERSSION

MARIO  
000100



WORLD  
1-1

TIME  
388






 x13



 86

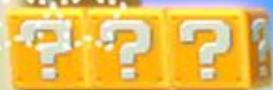
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100 x38



188  
003200











16:28

\$00001510

♥ 100



ME DAY  
RVICE

LIBERTY CITY  
POLICE  
DEPARTMENT



EST. 1980

TAKING THE LAW  
TO YOUR SIDE

LCPD



Replay missions from the Game section of the Pause Menu while off mission. Replaying old missions will not affect story progress.

\$500328

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Preorder content added.







ARRIVAL OF A TRAIN AT LA CIOTAT 1895

















Blue Base



30M

0:20

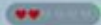
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9

10 Mins to Win

343  
INDUSTRIES

Alpha



WAVE 48

ALPHA

WAVE DONE









THE ORDER  
1886







 Crafting  Inventory  Block

# EFFICIENCY vs BEAUTY



GAMEPLAY AND STORY  
ARE STILL KEY

BUT LET'S USE ALL TOOLS WE CAN



SO WHAT IS  
THE FUTURE



SO WHERE ARE WE REALLY AT WITH LIGHTING IN GAMES?

# PBR vs OBR

CHALLENGING THE BUZZWORDS

# WHAT IS GOOD LIGHTING?



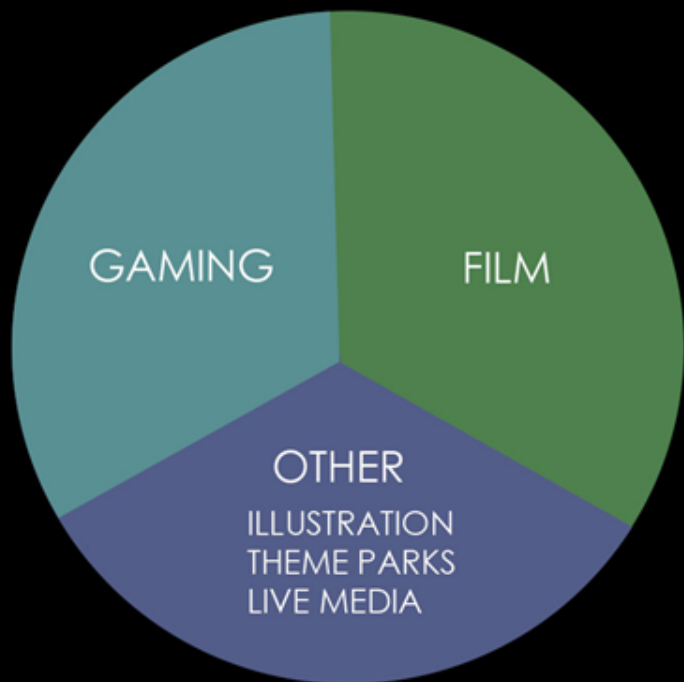
VS



# GOOD LIGHTING COMMUNICATES

- SHAPE AND FORM
- MOOD AND STORY
- LEADS THE PLAYER

# THE MERGING OF FIELDS



WHAT CAN WE LEARN  
FROM OUTSIDE OF OUR INDUSTRY



























A NEW IDEA TO CONSIDER

# OPTICALLY BASED RENDERING

CHALLENGING THE BUZZWORDS



























## CONTINUITY



## SECONDARY LIGHT AS KEY / BOUNCED LIGHT



# IMPLIED LIGHTING



# POOLS OF LIGHT





# POOLS OF LIGHT



# LIGHT ON DARK / DARK ON LIGHT



# NIGHT LIGHTING CINEMA VS GAMES





# NIGHT LIGHTING CINEMA VS GAMES



# NIGHT LIGHTING CINEMA VS GAMES



# FOG EXAGGERATION





# LOCALIZED FOG



# SPECULAR HIGHLIGHTS























## PERSISTANCE OF VISION CONSIDERATIONS



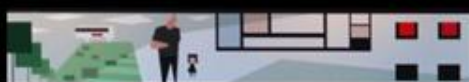


## PERSISTANCE OF VISION CONSIDERATIONS



## SELECTIVE VISIBILITY

















## Umbrella Light and Rain Structure







0 Night



1 Early Morning



2 Morning



3 Noon



4 Afternoon



5 Late Afternoon



6 Sun fall (Golden Hour)



7 Twilight Greenish dominant sky

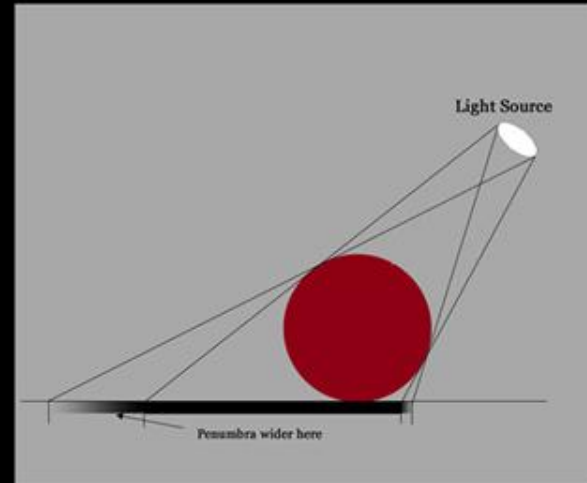
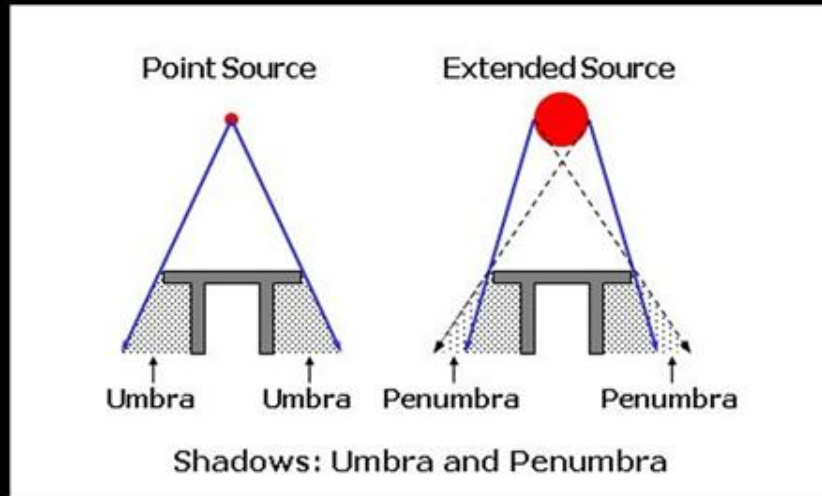
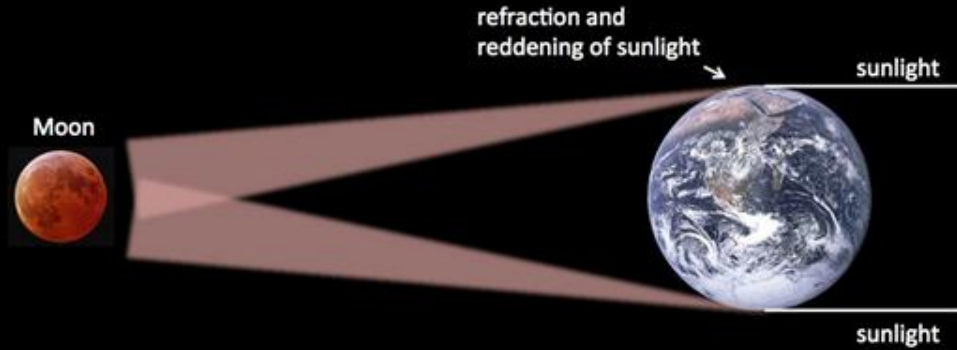


8 Night



WHAT CAN WE LEARN  
FROM LIFE

# PENUMBRA COLOR





# PENUMBRA COLOR



# PENUMBRA COLOR











SO WHAT IS  
THE FUTURE





BUILDING CREATIVE CULTURE

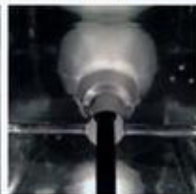
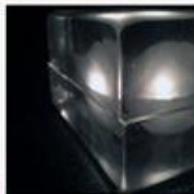














KEEP CREATING!!!!