



# Shop lighting and Colour preference

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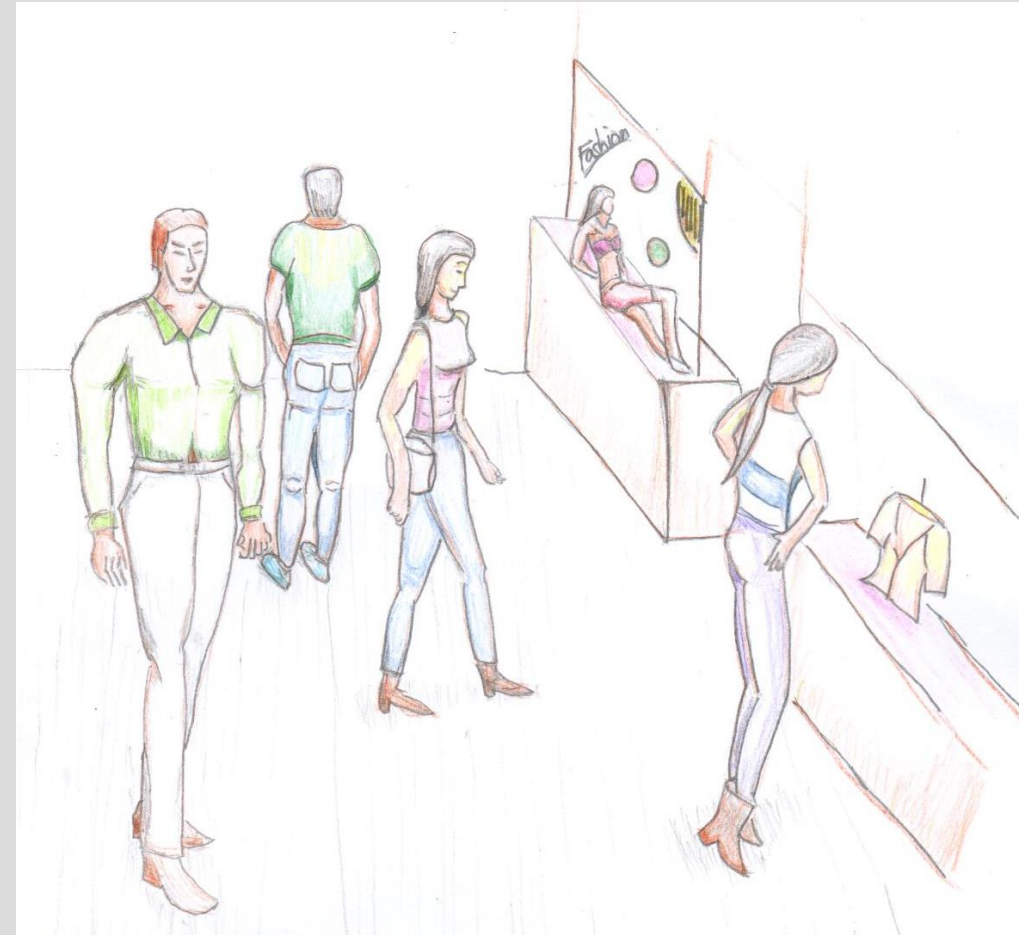
# About your customer...

- Do you really know your customer?
  - Why they enter your store, instead of the one next to you?
  - Why they buy product from you?
- Honestly, most shop owners don't. They did their best in the shop decoration and keep fingers crossed.
- A story about how light influence the attractive of people, would be shown.



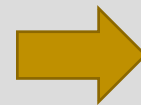
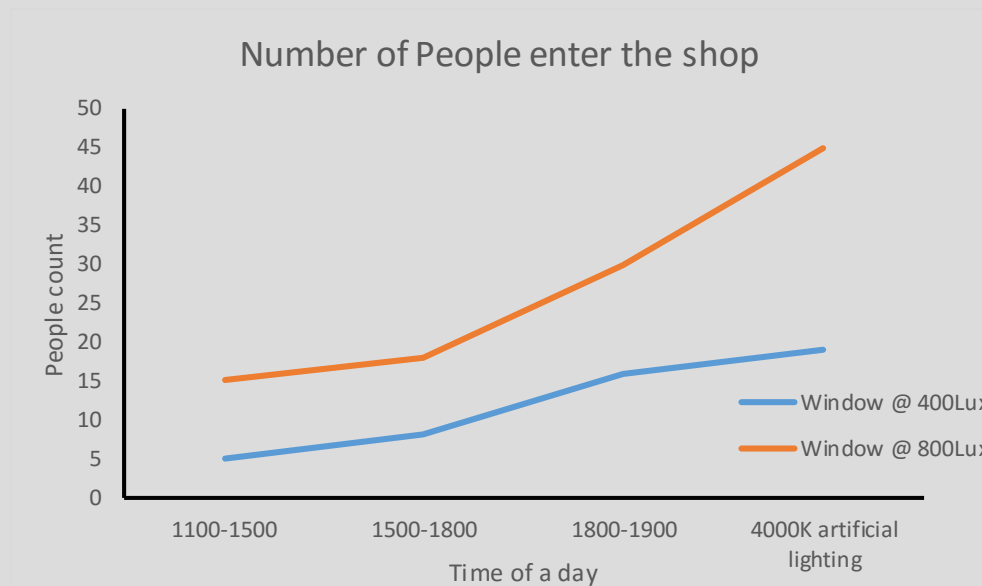
# Background

- There is a fashion shop located at the center of a small city. With multiple brands, they sell men/women clothes.
- The shop opened before lunch, and the people flow get crowded at after 1800 (after supper).
- There are 4 kind of light we are talking:
  - External light: daylight or artificial light (4000K)
  - Window lighting: in side display window
  - Spot light: on top of the model
  - Ambient light: uniform light inside the shop
- To keep the confidential, all picture/number are illustrated but with realistic reflection.

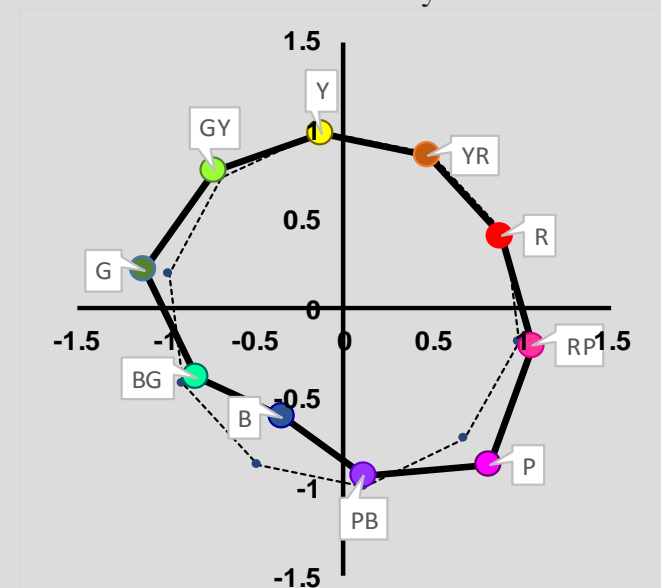


# How the local people sense the colour?

- We model the preference of the lighting.
  - Correlation of the **window lighting** and **the number of people** who enter the shop by PCP\* method.
  - PCP of visibility vectors shows how people sensitive to certain colour, in average.



PCP of visibility vectors



Strong P (purple) : the light is not enough

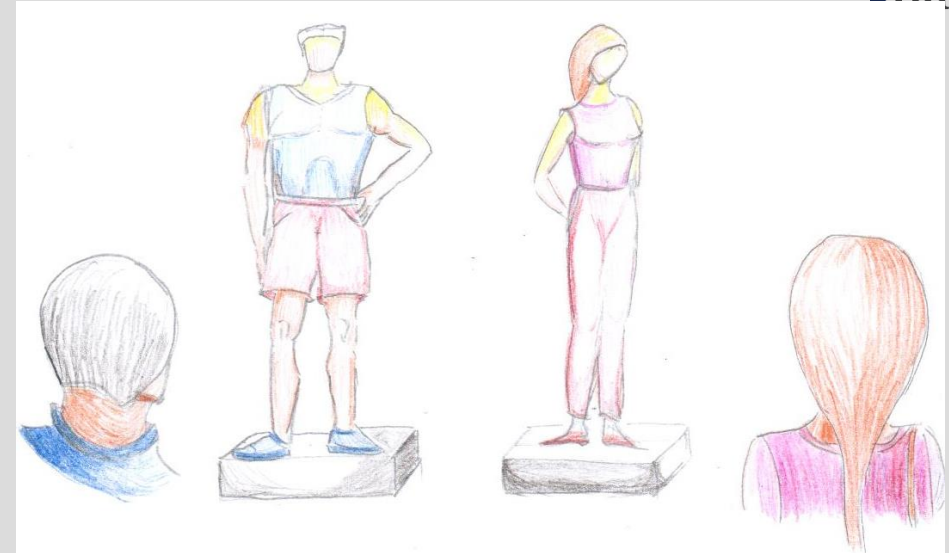
Strong G (green): local people is sensitive to green

Weak B (blue): local people is not sensitive to blue

\*PCP=Preference colour probe

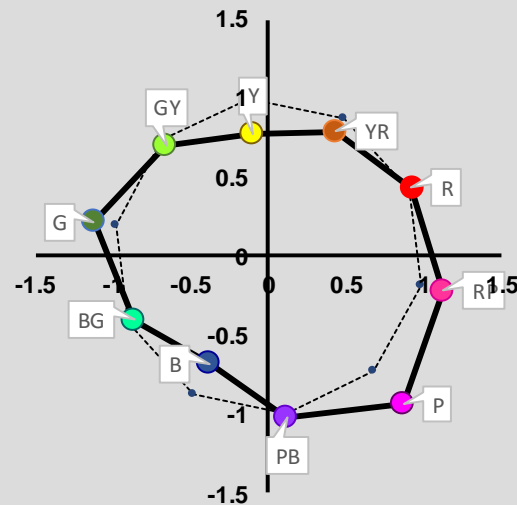
# What colour that people would buy?

- Again, we correlated the **product sale record** and the colour of **the nearest model**
- PCP of buying vectors **together with**\* the visibility vectors, shows how people like to certain colour, in average.

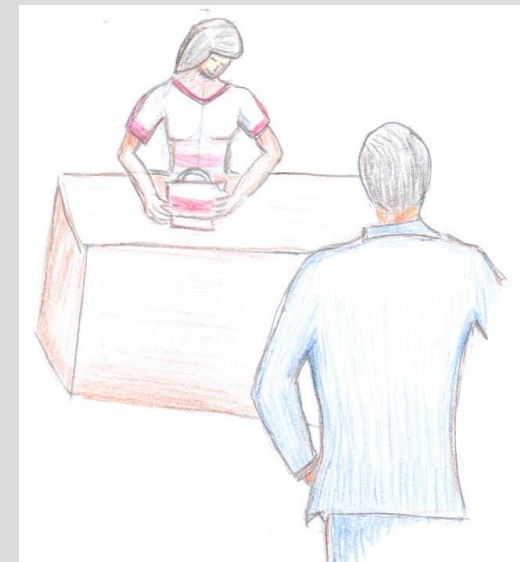


Colour of model	Visit	Buy
Red	25	15
Green	20	12
Blue	13	10

PCP of buying vectors



Strong P (purple), G (green), RP (red-purple): local people's preference  
 Weak B (blue) and Y (yellow): local people dislike them

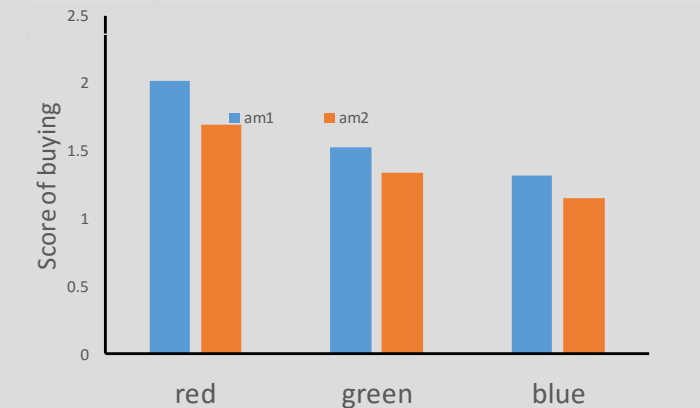
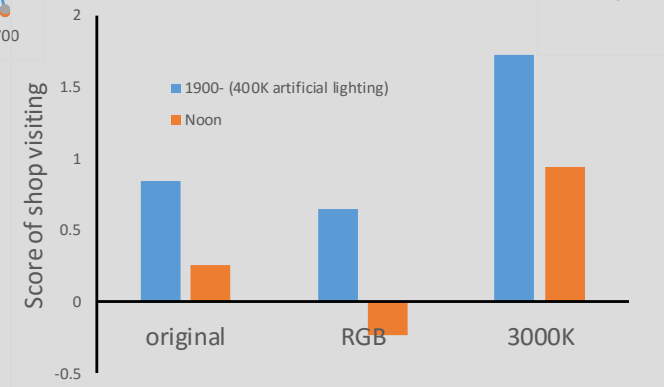
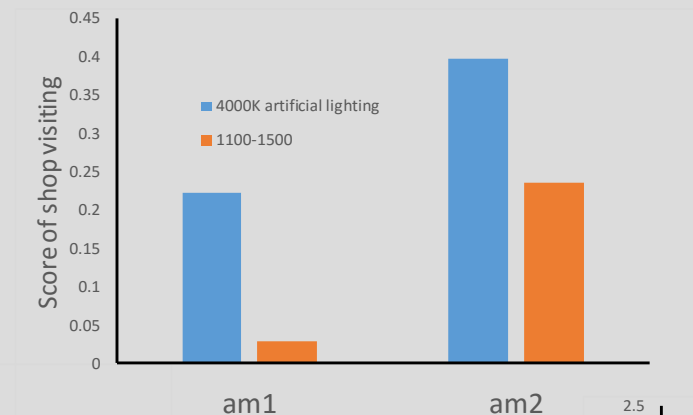
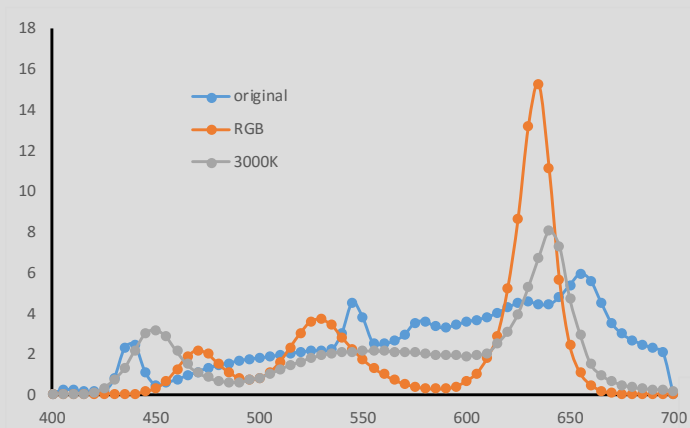


\* A reasonable buying should be happened from visibility to purchasing.

# How to improve?

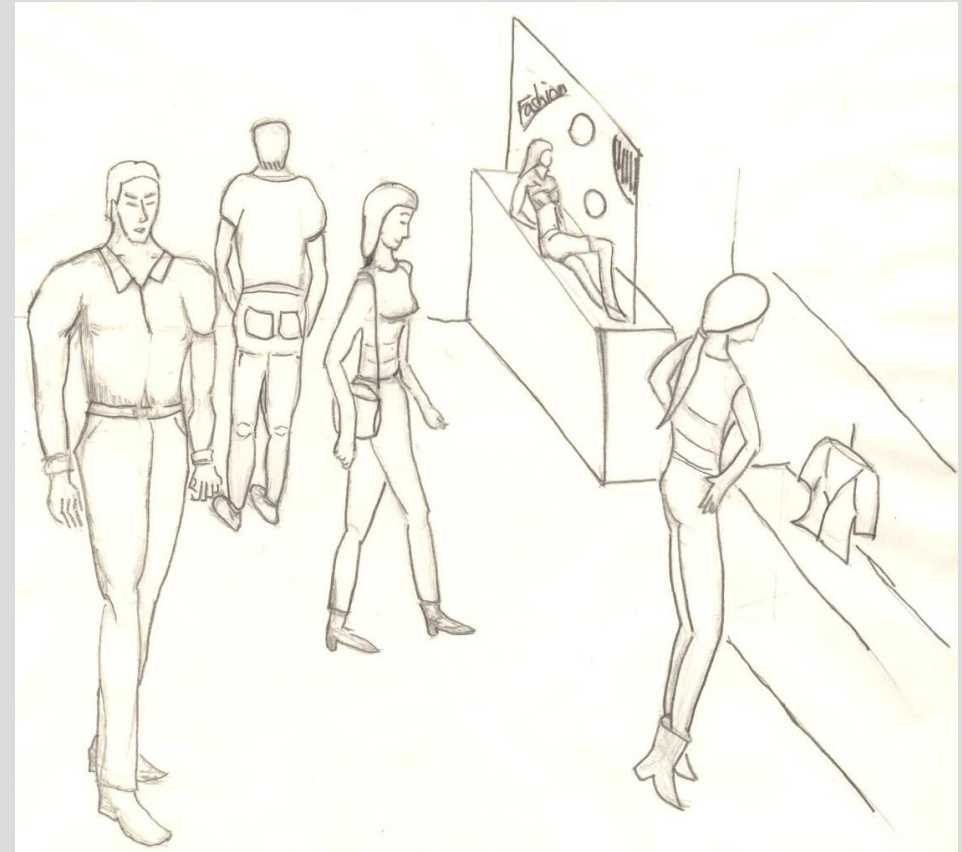
- Increase the window's lighting will increase the incoming people.
- We suggested **3000K at 800 Lux**.

- It is not so wise to modify the ambient lighting unless the illuminance level of spot light increases simultaneously or a low-price shop (model is less relevant).



# Other recommendations

- There should be purple, green and red in the display window to attract people's eyes and their passions to buy.
- Be careful of yellow colour in the display model, especially under warm white spot.
- Keep monitor the PCP diagram as the **change of the season** and **fashion interest**.





For more information, please  
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