

# Lecture 3.4

# Duplication

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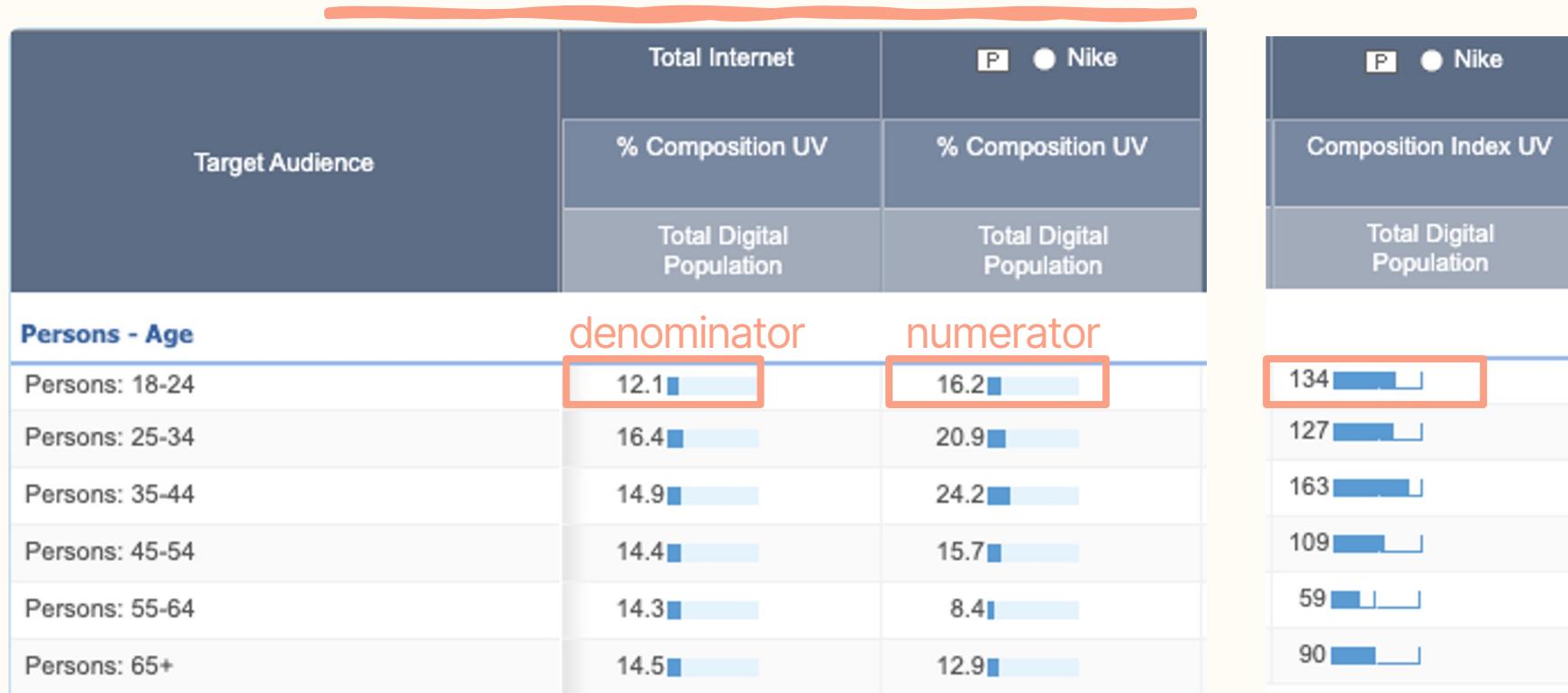
# Agenda

- Audience Dynamics
  - Audience Duplication
    - Incremental Reach
    - Expected Duplication
    - Observed Duplication
- ComScore Reports
  - Audience Duplication
  - Cross Visiting
- Team Assignment 1



Recap

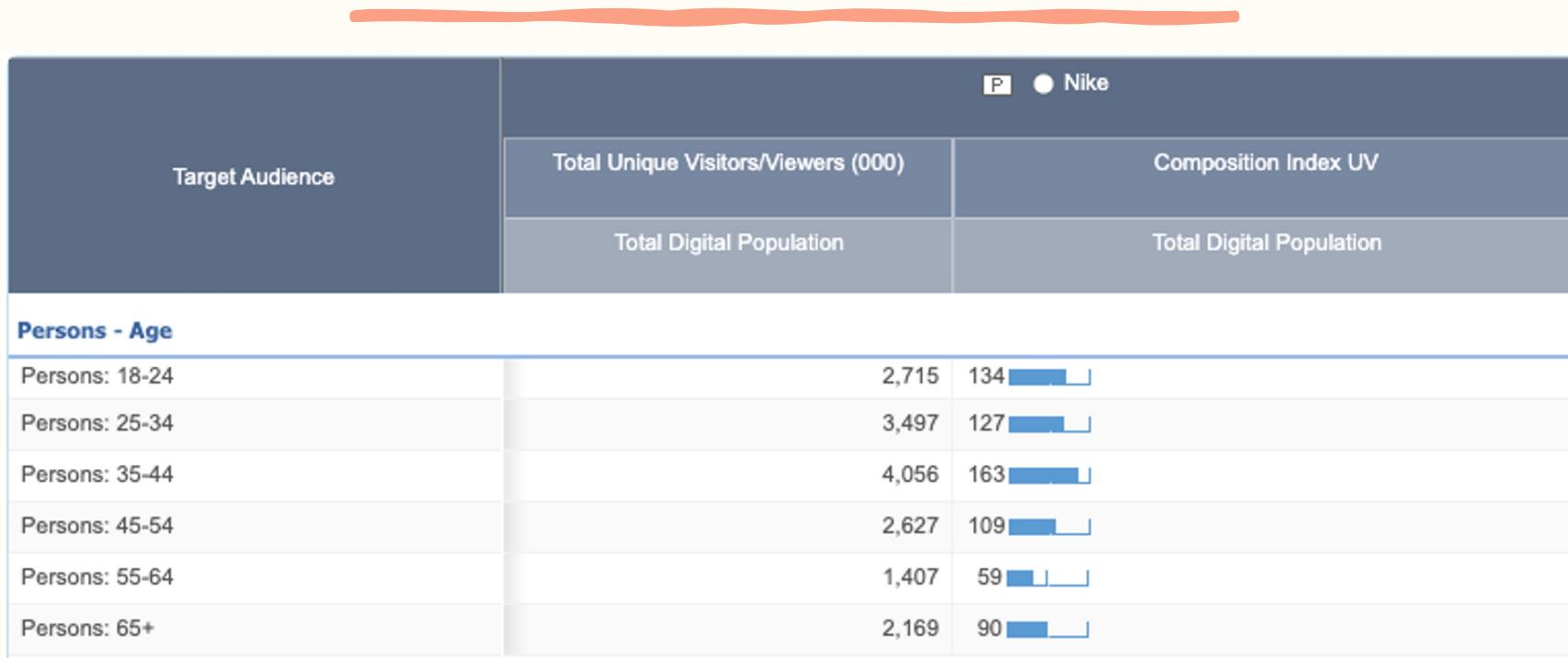
# Composition Index (comScore)



% Composition UV for the media property in the target group

$$\text{Composition Index} = \frac{\% \text{ Composition UV for the media property in the target group}}{\% \text{ Composition UV of the target group for the total digital population}} \times 100$$

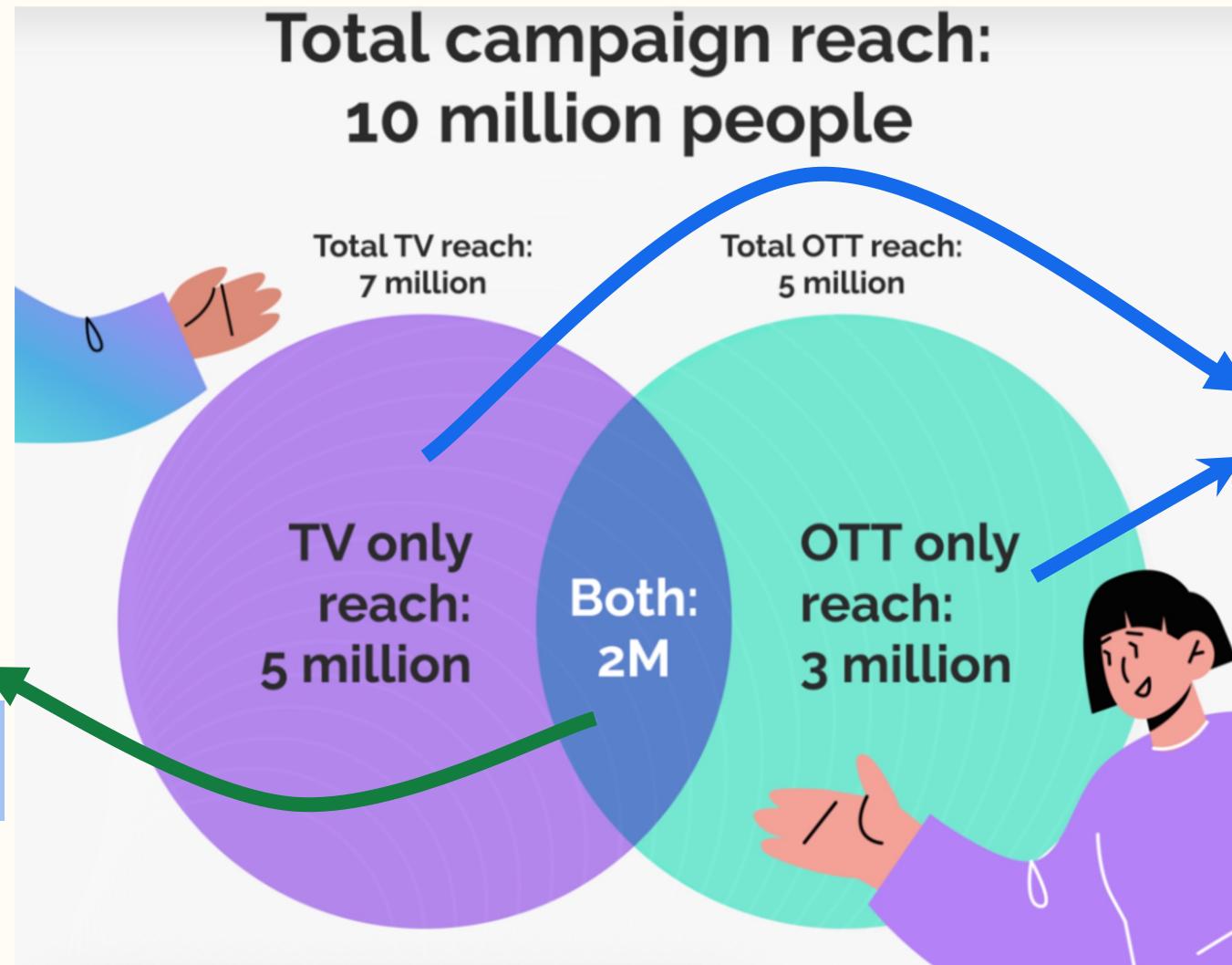
# Composition Index (comScore)



Note:

- **100** is a mathematical baseline, not a shared row of actual data
- Each demographic's index is calculated **independently**

# Audience Duplication



### Incremental Reach

Def:  
the unique audience exposed to a campaign on a new channel beyond the initial target audience

# Audience Duplication – Why Is It Important?

## Reach



## Frequency



# Importance of Audience Duplication

- Goals of Most Campaigns: Reach/Frequency
  - Unduplicated audience will increase **reach** of a campaign
  - Duplicated audience will increase **frequency** of a campaign



Dunk Low x LEGO® Collection

# DRAWN TO STAND OUT

Shop



## Audience Duplication Example - Reach Side

- Situation: Nike has a branding partnership with LEGO since summer 2025
- Goal: Nike's goal is to expand its online audience (rather than duplicate it) through its partnership with LEGO



## Audience Duplication (comScore)

- Question: To what extent does Nike's audience overlap with LEGO? In other words, are the same people visiting both sites? How much **incremental reach** does LEGO provide? **Audience Duplication**
  - Audience duplication on comScore shows the overlap in audience between Nike and LEGO. It helps gain insights how many new audience gained from other sites



## Audience Duplication (comScore)

- Question: To what extent does Nike's audience overlap with LEGO? In other words, are the same people visiting both sites? How much **incremental reach** does LEGO provide? **Audience Duplication**
  - Audience duplication on comScore shows the overlap in audience between Nike and LEGO. It helps gain insights how many new audience gained from other sites
  - Incremental Reach: Unduplicated reach LEGO brings beyond Nike's existing visitors
    - Incremental Reach (LEGO) = Unduplicated Reach – Reach (Nike)

■ = 8.3 – 6

■ = 2.3%

|   | Media                        | 🔔 | Total Digital Population            |         |                  |                    |                             |
|---|------------------------------|---|-------------------------------------|---------|------------------|--------------------|-----------------------------|
|   |                              |   | Total Unique Visitors/Viewers (000) | % Reach | Total Views (MM) | Total Minutes (MM) | Average Minutes per Visitor |
|   | Unduplicated                 | 🔔 | 23,383                              | 8.3     | 124              | 187                | 8.0                         |
|   | Duplicated - 2 or More Sites |   | 587                                 | 0.2     | 5                | 5                  | 8.5                         |
|   | Duplicated - All Sites       |   | 587                                 | 0.2     | 5                | 5                  | 8.5                         |
| 1 | Nike                         |   | 16,756                              | 6.0     | 91               | 159                | 9.5                         |
| 2 | LEGO.COM                     |   | 7,214                               | 2.6     | 33               | 28                 | 3.9                         |



## Cross Visiting (comScore)

- Question: To what extent does Nike's audience overlap with LEGO? In other words, are the same people visiting both sites? What is the relative share of traffic that LEGO contributes to Nike's audience? **Cross Visiting**
  - Cross visiting report shows a broader pattern of audience behavior across multiple media entities. It helps identify **content partnerships**, potential competitors, or new ad inventory opportunities where their target audiences already spend time.



## Cross Visiting (comScore)

- Question: To what extent does Nike's audience overlap with LEGO? In other words, are the same people visiting both sites? What is the relative share of traffic that LEGO contributes to Nike's audience? **Cross Visiting**
- Cross visiting report shows a broader pattern of audience behavior across multiple media entities. It helps identify **content partnerships**, potential competitors, or new ad inventory opportunities where their target audiences already spend time
- Index under the target media entity column

| Media in Rows |                | Base                     |            | P ● Nike                 |            |              |       |
|---------------|----------------|--------------------------|------------|--------------------------|------------|--------------|-------|
|               |                | Total Digital Population |            | Total Digital Population |            |              |       |
|               |                | Target Audience (000)    | % Vertical | Shared Audience (000)    | % Vertical | % Horizontal | Index |
|               | Total Internet | 281,129                  | 100.0      | 16,756                   | 100.0      | 6.0          | 100   |
| 1             | LEGO.COM       | 7,214                    | 2.6        | 587                      | 3.5        | 8.1          | 136   |

■ Interpretation: Among visitors who went to LEGO.com, they are 36% more likely to go to Nike.com compared to other sites.

# Cross Visiting (comScore)

- Cross visiting report shows a broader pattern of audience behavior across multiple media entities. It helps identify content partnerships, potential competitors, or **new ad inventory opportunities** where their target audiences already spend time
- Situation: Nike is considering a new social media engagement campaign. They want to know which social media platforms are driving traffic to their website so they can decide where to concentrate their ad spend.

| Media in Rows |                                  | Base                     |            | P ● Nike                 |            |              |       |
|---------------|----------------------------------|--------------------------|------------|--------------------------|------------|--------------|-------|
|               |                                  | Total Digital Population |            | Total Digital Population |            |              |       |
|               |                                  | Target Audience (000)    | % Vertical | Shared Audience (000)    | % Vertical | % Horizontal | Index |
|               | Total Internet                   | 281,129                  | 100.0      | 16,756                   | 100.0      | 6.0          | 100   |
|               | Social Media - Social Networking | N/A                      | N/A        | N/A                      | N/A        | N/A          | N/A   |
| 1             | Facebook And Messenger           | 220,818                  | 78.5       | 11,643                   | 69.5       | 5.3          | 88    |
| 2             | Bytedance Inc.                   | 156,144                  | 55.5       | 11,635                   | 69.4       | 7.5          | 125   |
| 3             | INSTAGRAM.COM                    | 153,992                  | 54.8       | 11,100                   | 66.2       | 7.2          | 121   |
| 4             | Reddit                           | 141,050                  | 50.2       | 8,472                    | 50.6       | 6.0          | 101   |
| 5             | X (formerly Twitter)             | 124,694                  | 44.4       | 7,095                    | 42.3       | 5.7          | 95    |

## O Interpretation:

- % Vertical: Among visitors who went to Nike.com in August 2025, **69.5%** also went to Facebook and Messenger.
- % Horizontal: Among visitors who went to Facebook and Messenger in August 2025, **5.3%** also went to Nike.com
- Index: Among visitors who went to Facebook and Messenger in August 2025, they are **12%** less likely to visit Nike.com, compared to other sites.

# Cross Visiting (comScore)

- Cross visiting report shows a broader pattern of audience behavior across multiple media entities. It helps identify content partnerships, **potential competitors**, or new ad inventory opportunities where their target audiences already spend time

| Media in Rows |                               | Base                     |            | P ● Nike                 |            |              |       |
|---------------|-------------------------------|--------------------------|------------|--------------------------|------------|--------------|-------|
|               |                               | Total Digital Population |            | Total Digital Population |            |              |       |
|               |                               | Target Audience (000)    | % Vertical | Shared Audience (000)    | % Vertical | % Horizontal | Index |
|               | + Total Internet              | 281,129                  | 100.0      | 16,756                   | 100.0      | 6.0          | 100   |
|               | Retail                        | N/A                      | N/A        | N/A                      | N/A        | N/A          | N/A   |
| 1             | + P Amazon                    | 236,283                  | 84.0       | 13,157                   | 78.5       | 5.6          | 93    |
| 2             | + P Wal-Mart                  | 134,307                  | 47.8       | 11,217                   | 66.9       | 8.4          | 140   |
| 3             | + P eBay                      | 86,147                   | 30.6       | 7,075                    | 42.2       | 8.2          | 138   |
| 4             | + P TEMU.COM                  | 83,236                   | 29.6       | 5,786                    | 34.5       | 7.0          | 117   |
| 5             | + M Apple.com Worldwide Sites | 73,346                   | 26.1       | 5,058                    | 30.2       | 6.9          | 116   |

■ which site is the greatest competitors to Nike?

# Audience Duplication Example - Frequency Side

- Audience Reach (August 2025, comScore Data)

- Netflix: 32.5%
- Hulu: 17.3%

|   | Media                           | Total Unique Visitors/Viewers (000) | % Reach | Total Visits (000)       | Total Minutes (MM)       | Desktop Display-Only UV (000) |
|---|---------------------------------|-------------------------------------|---------|--------------------------|--------------------------|-------------------------------|
|   |                                 |                                     |         | Total Digital Population | Total Digital Population | Desktop                       |
|   | Total Internet : Total Audience | 281,129                             | 100.0   | 103,172,318              | 2,421,367                | 0                             |
| 1 | Netflix Inc.                    | 91,318                              | 32.5    | 145,526                  | 31,810                   | 17,426                        |
| 2 | Hulu                            | 48,524                              | 17.3    | 124,744                  | 12,120                   | 3,757                         |

- Are these the same people?
- Do we expect them to be the same people?  
○ Why or why not?

# Audience Duplication – Observed Duplication

- Definition: The extent to which two media outlets have an overlap in their audience.
  - “**Observed Duplication**” - The % of users that access both outlet A and outlet B
    - Also called **absolute duplication**

# Audience Duplication - Example

- Audience Reach (August 2025, comScore Data)

  - Netflix: 32.5%

  - Hulu: 17.3%

  - Both: 6.3% -- *Observed Duplication*

  - Is 6.3% high or low? What do we expect?

|   | Media                        | 🏷️ | Total Digital Population            |         |                  |                    |
|---|------------------------------|----|-------------------------------------|---------|------------------|--------------------|
|   |                              |    | Total Unique Visitors/Viewers (000) | % Reach | Total Views (MM) | Total Minutes (MM) |
|   | Unduplicated                 | 🔔  | 122,106                             | 43.4    | 1,639            | 40,053             |
|   | Duplicated - 2 or More Sites |    | 17,736                              | 6.3     | 266              | 9,179              |
|   | Duplicated - All Sites       |    | 17,736                              | 6.3     | 266              | 9,179              |
| 1 | Netflix Inc.                 |    | 91,318                              | 32.5    | 1,230            | 31,810             |
| 2 | Hulu                         | ●  | 48,524                              | 17.3    | 409              | 12,120             |

# Audience Duplication – Expected Duplication

- Any two outlets have some amount of duplication expected based on chance (randomness)

# How to Calculate Expected Duplication?

- Law of Joint Probability
- If event A has a Probability  $P(A)$ , event B has Probability  $P(B)$  then what is the probability of both these events occurring, assuming they are independent of one another?
- Joint Probability:  $P(A \text{ and } B) = P(A) * P(B)$

# Audience Duplication – Expected Duplication

- Observed duplication is considered high if it is **above** expected duplication

High: Observed Duplication  $>$  Expected Duplication

Low: Observed Duplication  $<$  Expected Duplication

# Audience Duplication - Example

- Audience Reach (August 2025, comScore Data)

- Netflix: 32.5%

- Hulu: 17.3%

- Both: 6.3% -- *Observed Duplication*

- **Is 6.3% high or low? What do we expect (i.e. what is the expected duplication)?**

# Audience Duplication - Example

- Audience Reach (August 2025, comScore Data)

- Netflix: 32.5%

- Hulu: 17.3%

- **Both:** 6.3% -- *Observed Duplication*

- **Is 6.3% high or low? What do we expect (i.e. what is the expected duplication)?**

- Joint Probability (Hulu and Netflix)

- = Probability (Hulu) \* Probability (Netflix)

- =  $0.325 \times 0.173$

- = 0.056

- = 5.6%

# Audience Duplication - Example

- Audience Reach (August 2025, comScore Data)

|                         |  |
|-------------------------|--|
| ○ Netflix:              | 32.5%                                      |
| ○ Hulu:                 | 17.3%                                      |
| ○ Both:                 | <b>6.3% -- <i>Observed Duplication</i></b> |
| ○ Expected Duplication: | <b>5.6%</b>                                |

- **Observed Duplication > Expected Duplication**
- Conclusion?

# What does this mean?

- Any observed (absolute) duplication higher than expected duplication is some evidence of **audience affinity**, which refers to the degree of connection or similarity between a specific audience and a particular product, service, brand, content, or topic.

# Admin

- Week 7 Knowledge Blast & Week 8 Online Discussion
  - Available on Canvas at 4:30pm today
  - Due by end of Sunday (October 12, 11:59 pm)
- Team Assignment 1
  - Instructions and group details are available on Canvas
  - Due by end of day Wednesday, October 15
- Feedback Survey

# Team Assignment 1