Positioning

- ❑ **Concepts**
- ❑ **Applications**
- ❑ **Uses**

Positioning

Product Positioning

Us

• Comp 1

• Comp 2

Strength
(Importance)

Water Resistance
(Importance)

ME Positioning 2006 - 2

1
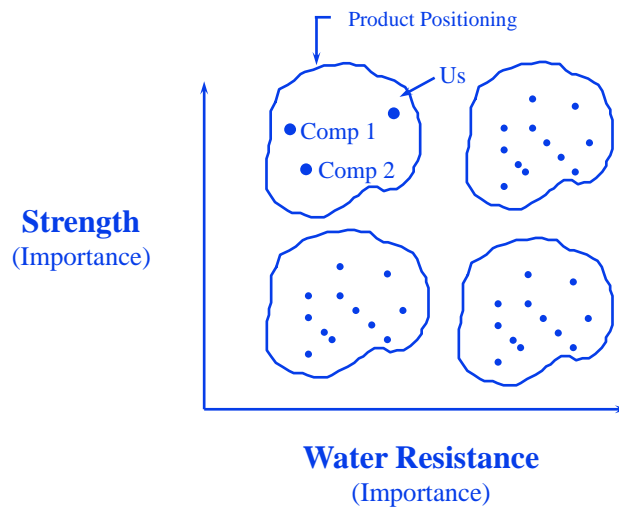
Some Positioning Bases

❑ **Life style (self-concept) positioning**
  - (e.g., MTV is for the anti-establishment, hip, and under-30 audience),

❑ **Attribute positioning**
  - (e.g., *amazon.com is* the world's largest bookstore),

❑ **Benefit positioning**
  - (e.g., Discount Air Express: Overnight, not overpriced),

❑ **Competitive positioning**
  - *(e.g., Listerine kills more germs than competing products;* Meisterbrau tastes like Budweiser at a fraction of its price),.

❑ **Time-based (e.g., usage occasion) positioning**
  - *(e.g., Nyquil is the* night-time cold medicine)   ME Positioning 2006 - 3

Some Successful Positioning Themes

Apple iPod	**1000 songs**
BMW	**Exceptional performance**
Burger King	**Have it your way**
Charmin Tissue	**Softness**
Coke	**Authentic, real, original**
Chevy Trucks	**Tough, strong, durable**
Colgate Total Toothpaste	**Total dental protection**
Disney	**Wholesome family entertainment**
GE	**Quality of life**
Mobil Service Stations	**Fast, friendly service**
Universal's Orlando	**Thrills, excitement, escape**
Visa	**Accepted everywhere**
Volvo	**Safety**
Viagra	**Quality of life**
Lipitor	**More potent at lower price**

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Positioning: Some Key Concepts

▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪

❑ *Differentiation (What you do to an offering)*:

- **Creating tangible or intangible differences on one or more attributes between a focal offering and its main competitors.**

❑ *Positioning (What you do to the minds of customers)*:

- **A set of strategies a firm develops to differentiate its offering in the minds of its target customers. Successful positioning will result in the offering occupying a distinct, important, and sustainable position in the minds of the target customers.**

General Positioning Options

▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪

➢ Unique (*Only supplier offering true, four color packaging*)

➢ Superior (*Relative to competition, we deliver 20% more on time delivery*)

➢ Equal but cheaper (commodity) strategy (*We will meet or beat any competitor's price*)

Key Concepts

- -

❏ *Mapping*:

- ▪ **Techniques that enable managers to develop differentiation and positioning strategies by helping them to visualize the competitive structure of their markets as perceived by their customers.**
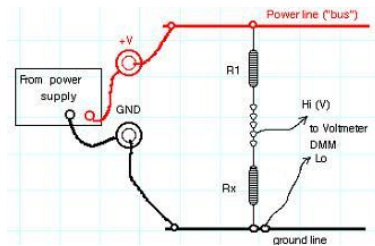
Key Concepts

- -

❏ *Mapping*:

- ▪ **The maps are derived from data of customer perceptions of existing products (and new concepts) along various attributes, perceptions of similarities between brands, preferences for the products, or measures of behavioral response of customers toward the products.**

Why Mapping?
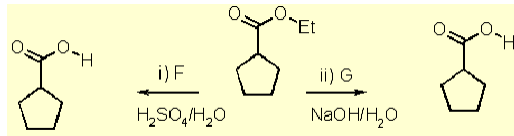
An organic chemist reads diagrams such as the one here

An Electrical Engineer reads diagrams such as the one here

Example: Positioning American Airlines in a New Market

❑ Select a set of airlines which are of interest to the target group of customers (including AA).

❑ Identify a set of key attributes on which these airlines are evaluated by the target group (e.g., through focus groups).

❑ Ensure that customers are familiar with all airlines (e.g., through video presentation).

❑ Have customers evaluate each airline on the attributes:

	Poor						Excellent		
Convenience	1	2	3	4	5	6	7	8	9
Punctuality	1	2	3	4	5	6	7	8	9
Service	1	2	3	4	5	6	7	8	9
Quality	1	2	3	4	5	6	7	8	9

Measure preferences also…

	Low						High		
Likelihood of use	1	2	3	4	5	6	7	8	9

5

Positioning
A Simple Example

Positioning of five airlines

	AA	UA	US	Con	SW
Convenience	5.0	8.0	3.0	3.0	3.0
Punctuality	6.0	5.0	5.0	4.0	8.0
Overall_service	8.0	7.0	5.0	4.0	6.0
Comfort/Quality	6.0	6.0	4.0	4.0	3.0

Perceptual Map: Brands Only
Q: What are the Dimensions?

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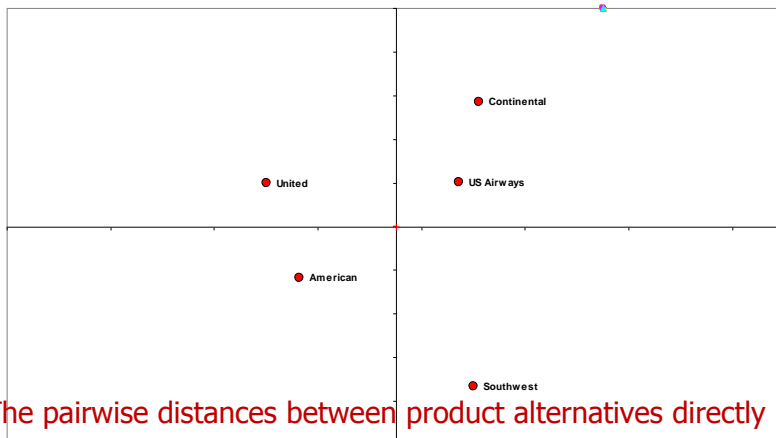

- Continental
- United
- US Airways
- American
- Southwest
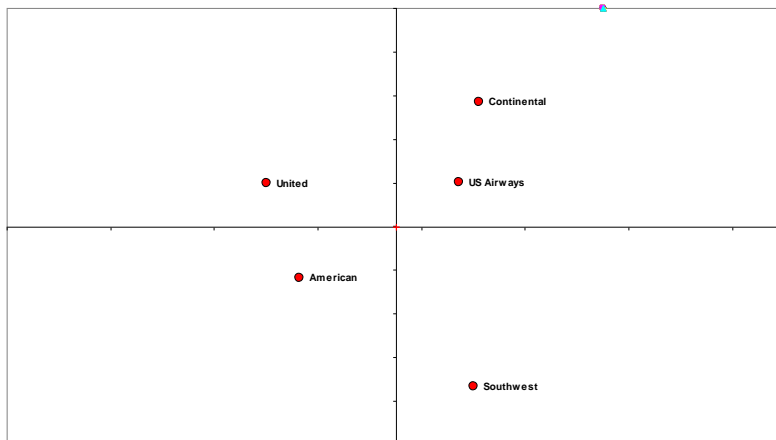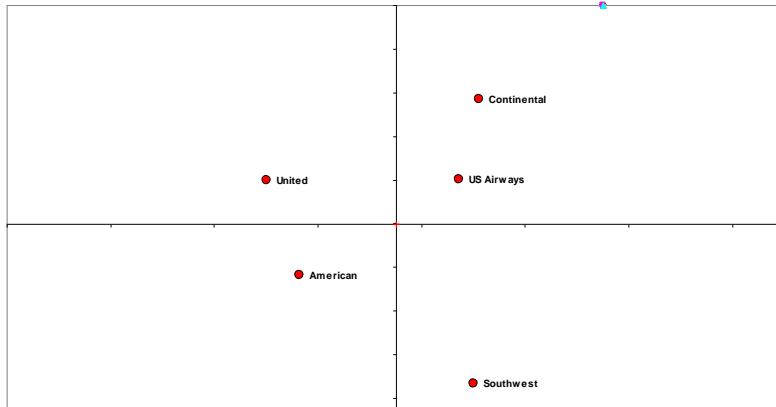
A graphical representation in which competing alternatives are plotted in a Euclidean space.

Perceptual Map: Brands Only
Q: What are the Dimensions?

- Continental
- United
- US Airways
- American
- Southwest
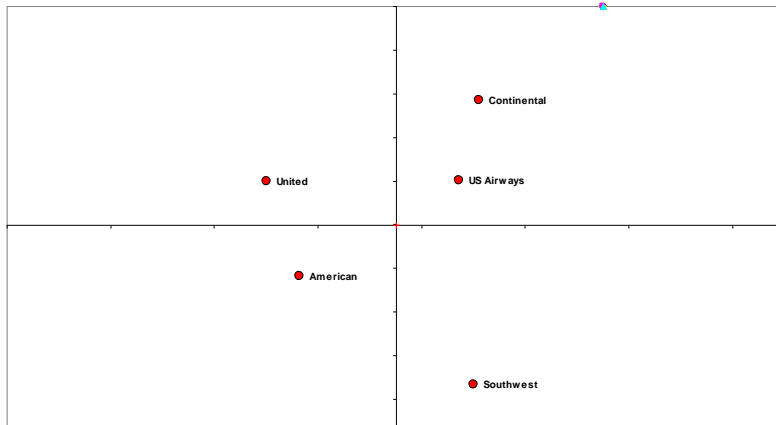
(1) The pairwise distances between product alternatives directly indicate the "perceived similarities" between any pair of products, that is, how close or far apart the products are in the minds of cust.

Perceptual Map: Brands Only
Q: What are the Dimensions?

Continental

United   US Airways

American

Southwest

The closer two brands are together in the map, the more similar they are perceived to be by customers, and therefore, are more direct competitors.

Perceptual Map: Brands Only
Q: What are the Dimensions?

Continental

United   US Airways

American
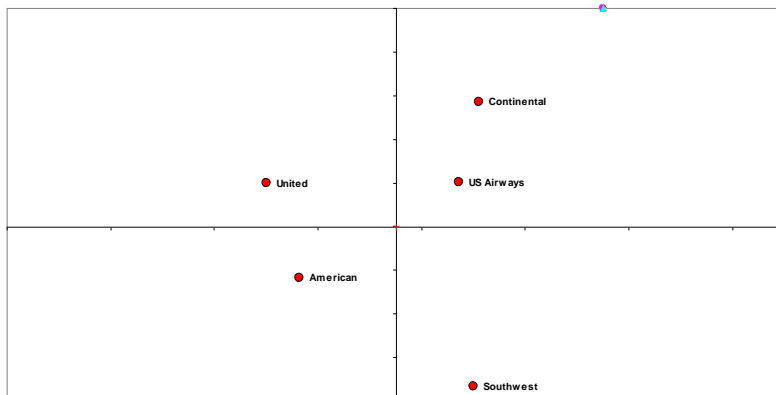
Southwest

Map shows that United and AA compete with each other; US Airways and Continental are likely to compete more directly with each other, and Southwest has a relatively unique position.

Perceptual Map: Brands and Attributes

Variance: 31.6%

Continental

Comfort
United
Convenience

Ease?

Variance: 55.6%

American

Overall service

Performance?

Southwest

Punctuality
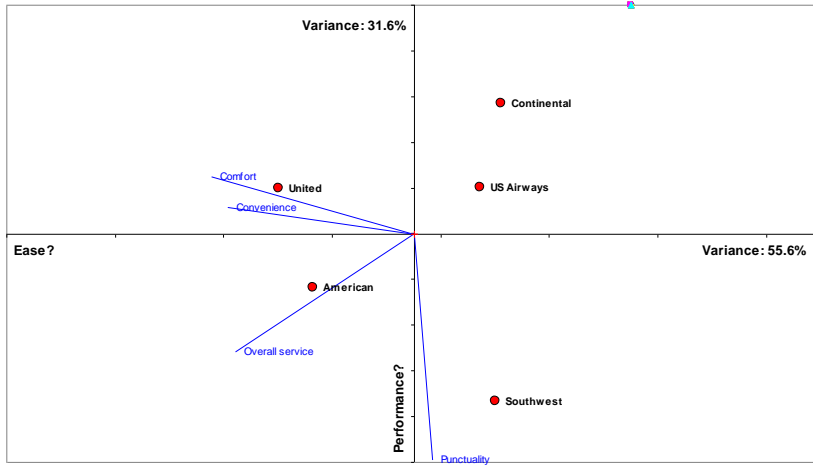
(2) A vector (i.e., line) on the map (shown by a line segment with an arrow) indicates both magnitude and direction in the Euclidean space.

Vectors are usually used to geometrically denote attributes of the perceptual ma

Perceptual Map: Brands and Attributes

Variance: 31.6%

Continental

Comfort
United
Convenience

Ease?

Variance: 55.6%

American

Overall service

Performance?

Southwest
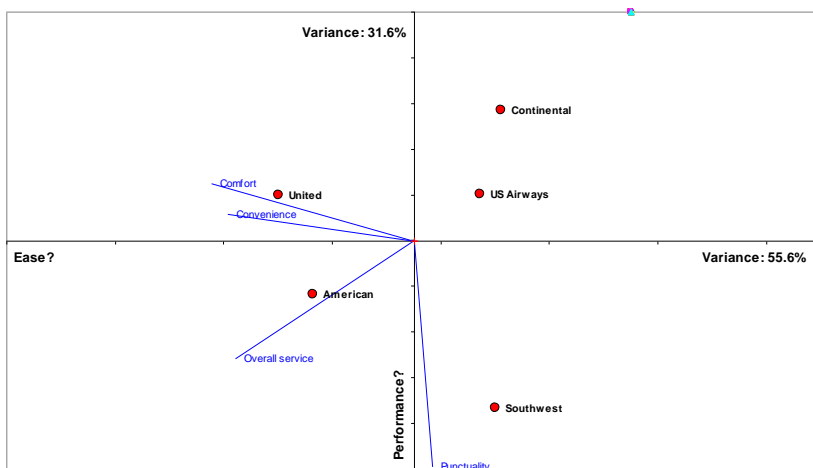
Punctuality

SW dominates on Perform (punctuality, here) and Un has the edge in terms of Comf. & Conv. The horiz. dim. explains about 55% of the variance in the data, and the vert. dim. explains about 32% of the variance in the data.

Perceptual Map:
Brands and Attributes

Variance: 31.6%

Continental

Comfort ● United   ● US Airways
Convenience

Ease?   Variance: 55.6%

● American

Overall service

Performance?

Southwest

Punctuality
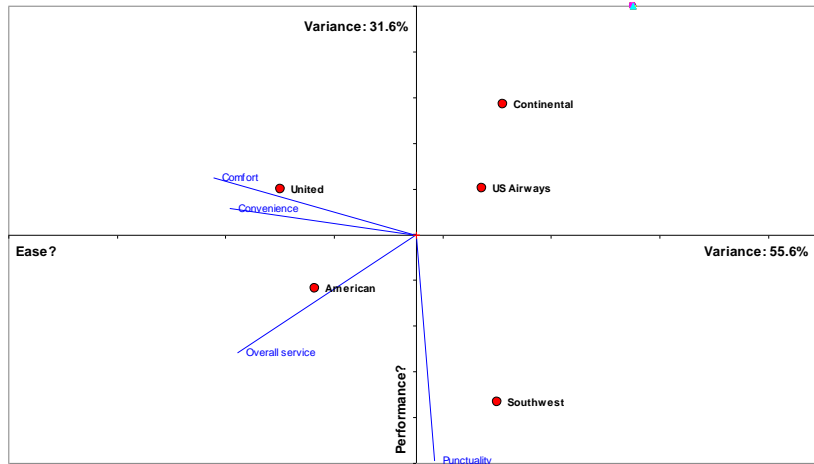
(3) The axes of the map are a special set of vectors suggesting the underlying dimensions that best characterize how customers differentiate between alts.

■ ■

❑ First, the map shows the intensity of competition between the brands

- The closer two brands are together in the map, the more similar they are perceived to be by customers, and therefore, are more direct competitors.

- Beck's and Heinekin are close competitors

- Old Milwaukee and Coors Light are far apart from each other and are not direct competitors.
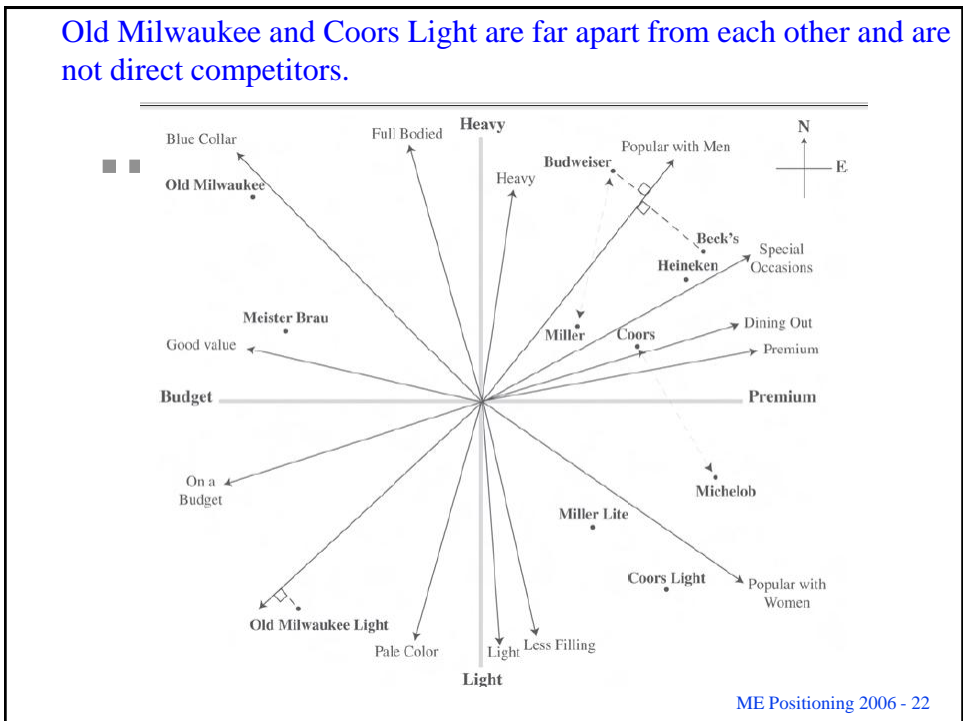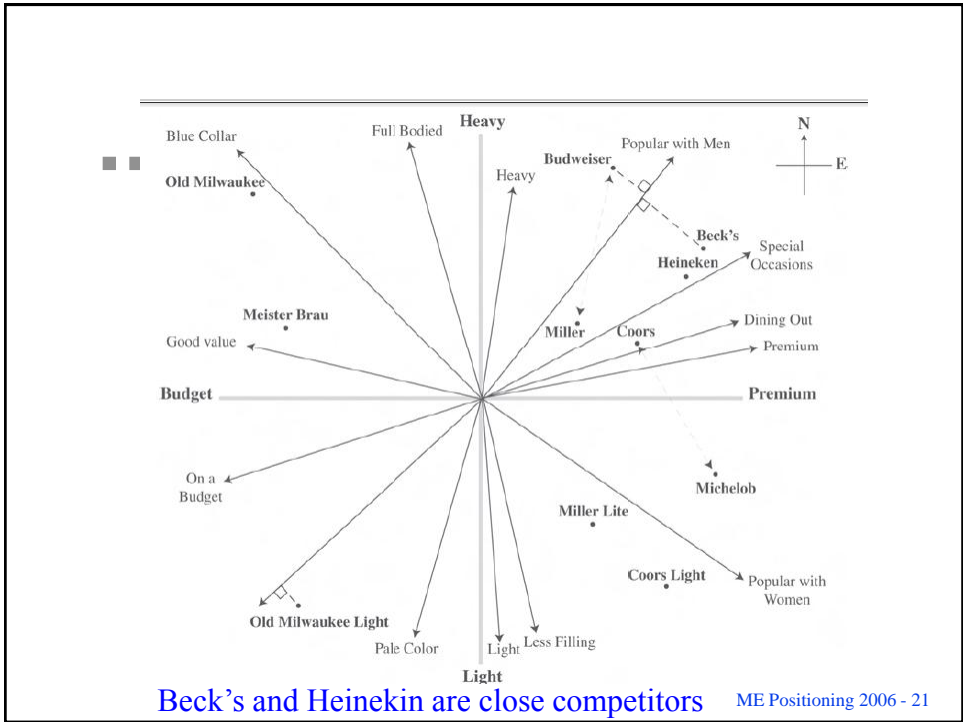
- The distance (dissimilarity) between Budweiser and Miller is about the same as the distance between Coors and Michelob, suggesting that the intensity of competition between these pairs of brands is roughly of the same order.

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Beck's and Heinekin are close competitors

Old Milwaukee and Coors Light are far apart from each other and are not direct competitors.

11

The distance (dissimilarity) between Budweiser and Miller is about the same as the distance between Coors and Michelob, suggesting that the intensity of competition between these pairs of brands is roughly of the same order.

12
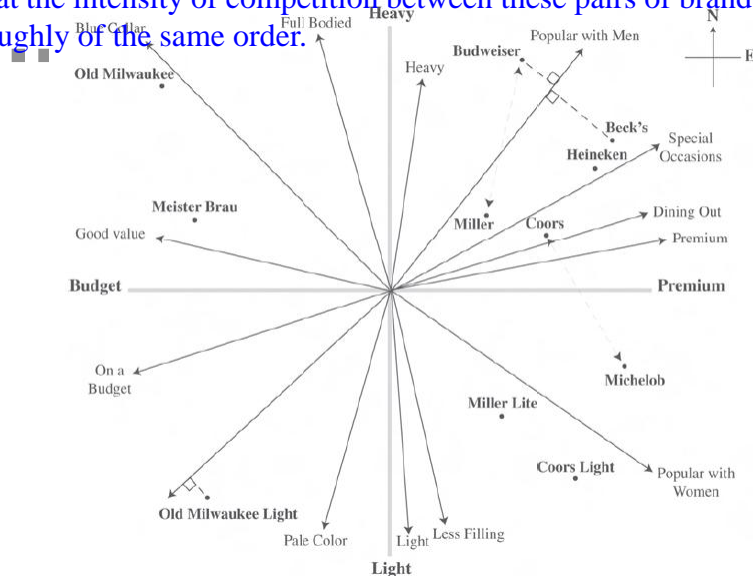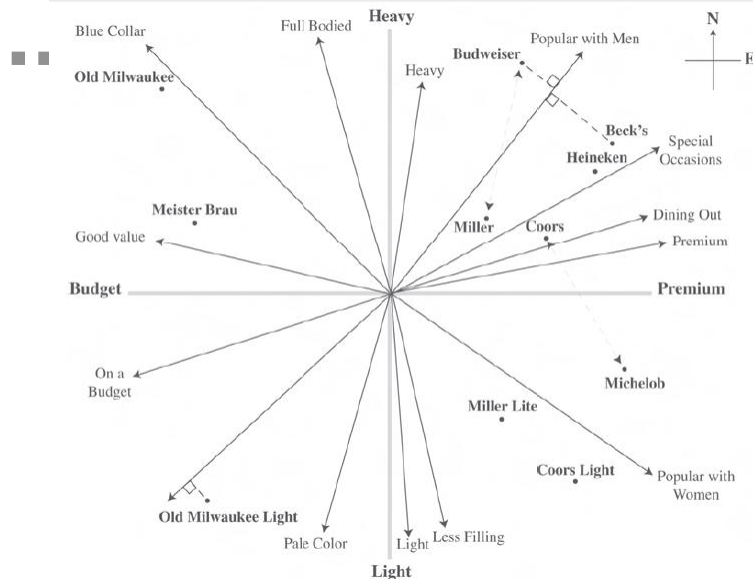
❏ Second, the map summarizes how customers perceive each brand on each attribute.

❏ Budweiser is the most popular beer with men (Beck's is nearly as popular with men).

❏ To see this, move your eye in a northeast direction along the line "Popular with Men."

❏ The farther away from origin a beer is located along this direction, the more popular it is with men.

Budweiser is the most popular beer with men (Beck's is nearly as popular with men).

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□ This also means that, as you move in the opposite direction (i.e., southwest) away from the origin, the beers become less popular with men. Thus, Old Milwaukee Light is least popular with men.

□ Customer perceptions of these beers along each of the 13 attributes can be interpreted in the same manner

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Old Milwaukee Light is least popular with men.

14
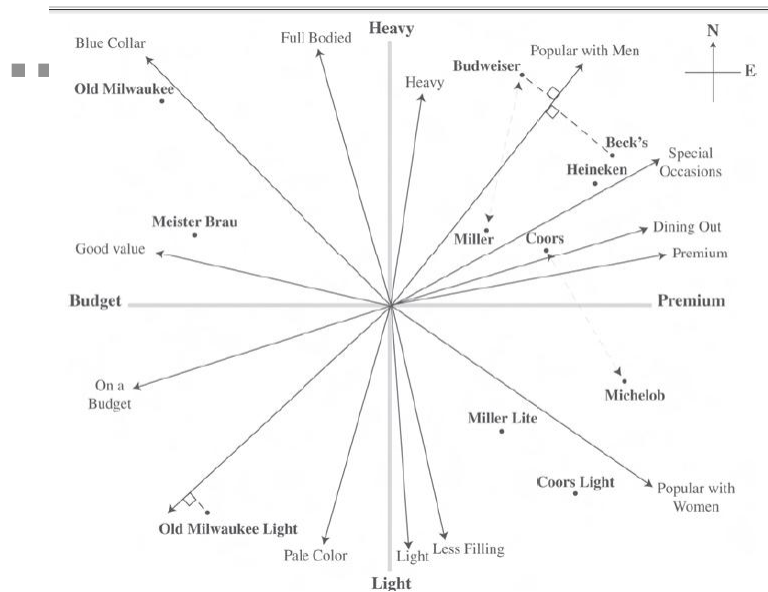
❑ Third, the map shows the relationships between the attributes. The smaller the angle between any two vectors, the more correlated they are with each other.

  ▪ beers that are "popular with men" are also likely to be "heavy."

---

beers that are "popular with men" are also likely to be "heavy."

❑ Of particular interest is the relationship between the vertical and horizontal axes and the attributes.

❑ The horizontal axis (in the east direction) is more closely aligned with the attributes "premium," "dining out," and "special occasions" (i.e., they are pointing in nearly the same direction as the horizontal axis).

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■ ■

❑ Likewise, in the westerly direction, the horizontal axis is most closely aligned with the attributes "on a budget" and "good value."

❑ Thus, the horizontal axis (the west-east dimension) indicates an underlying dimension of "budget-premium," along which customers seem to characterize their perceptions of the differences between these beers.

❑ Note that the axes can be rotated (rigidly) to improve interpretation.

In the westerly direction, the horizontal axis is most closely aligned with the attributes "on a budget" and "good value."

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Thus, the horizontal axis (the west-east dimension) indicates an underlying dimension of "budget-premium," along which customers seem to characterize their perceptions of the differences between these beers.

❑ Fourth, the length of each attribute line indicates how well that attribute differentiates between the beers.

❑ The longer the line the stronger is the differentiation.

❑ Thus, customers are better able to differentiate between the brands on the attribute, "popular with men" than on the attribute, "good value."

❑ Michelob is located between the "heavy" beers and the "light" beers, thus being a weak competitor in both markets.

Thus, customers are better able to differentiate between the brands on the attribute, "popular with men" than on the attribute, "good value."

Blue Collar
Full Bodied
Heavy
N
Popular with Men
E
Budweiser
Heavy
Old Milwaukee
Beck's
Special
Occasions
Heineken
Meister Brau
Dining Out
Good value
Miller **Coors**
Premium
Budget
Premium
On a
Budget
Michelob
Miller Lite
Coors Light
Popular with
Women
Old Milwaukee Light
Pale Color
Light Less Filling
Light

Michelob is located between the "heavy" beers and the "light" beers, thus being a weak competitor in both markets

Blue Collar
Full Bodied
Heavy
N
Popular with Men
E
Budweiser
Heavy
Old Milwaukee
Beck's
Special
Occasions
Heineken
Meister Brau
Dining Out
Good value
Miller **Coors**
Premium
Budget
Premium
On a
Budget
Michelob
Miller Lite
Coors Light
Popular with
Women
Old Milwaukee Light
Pale Color
Light Less Filling
Light

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❑ Old Milwaukee Light has very little direct competition (i.e., there is a gap in the market with no other brand located close to it), indicating potential opportunity for a new beer positioned in this quadrant.

❑ To be in this quadrant, a beer needs to be

- pale in color,
- viewed as appropriate for someone on a budget,
- not be a beer for special occasions,
- not be perceived as a premium beer,

□ To be in this quadrant, a beer needs to be

- pale in color,

- viewed as appropriate for someone on a budget,

- not be a beer for special occasions,

- not be perceived as a premium beer,

□ Of course, before positioning a brand in this quadrant, we need to first assess whether there would be a sufficient number of customers who would prefer/buy such a beer.

□ Whether or not a beer is popular with women does not indicate anything about whether it will be popular with men (these two attributes are perpendicular to each other).

□ Thus, although Beck's and Budweiser are equally popular with men, among women, Beck's is more popular than Budweiser.

Whether or not a beer is popular with women does not indicate anything about whether it will be popular with men (these two attributes are perpendicular to each other).

Thus, although Beck's and Budweiser are equally popular with men, among women, Beck's is more popular than Budweiser.

Mapping Methods in Marketing

Perceptual Maps	Preference Maps	Joint Space Maps (includes both perception & preference)
Similarity-based methods	Ideal-point model (unfolding model)	External analysis using PREFMAP-3
Attribute-based methods	Vector model	Simple "joint space maps" using modified perceptual mapping methods

Italicized items are included in the text/software (Coming soon: Ideal Point Model)

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Mapping Techniques

▪ ▪

❑ **Mapping perceptions**

  ▪ **Attribute-ratings methods (particularly useful for functional products)**

  ▪ **Overall-similarity methods (particularly useful for image-oriented products)**

❑ **Mapping preferences**

  ▪ **Include an overall preference vector in a perceptual map**

  ▪ **"External" analysis to fit preferences of individuals on a common perceptual map**

Perceptual Maps Using Attribute Ratings

▪ ▪

Example: Positioning of a new car concept

  ▪ **Select a set of cars which are of interest to the target group of customers (including the new product/concept of interest).**

  ▪ **Identify a set of key attributes on which these cars are evaluated by the target group (e.g., through focus groups).**

  ▪ **Ensure that customers are familiar with all the products of interest (e.g., through video presentation).**

  ▪ **Have customers evaluate each car on the chosen set of attributes.**

Unattractive	...........................…	**Attractive (A1)**
Quiet	................….............	**Noisy (A2)**
Unreliable	…...........................	**Very reliable (A3)**
Uninteresting	…………………...	**Interesting (A4)**
Low prestige	...........…..............…	**High prestige (A5)**
.		
..		
Definitely would		
not buy	...........................….....	**Definitely would buy (Preference)**

Perceptual Maps Using Attribute Ratings

❑ **Generate a matrix of inputs for the analysis consisting of each customer's (C1, C2,...) ratings of each brand on each of the attributes (A1, A2, A3,....)**

		A1	A2	A3	A4..............	A15
C1	**Audi 90**	6	3	7	2	2
	Toyota Supra	4	3	4	1	5
	New G20	3	6	2	7	7
	..					
C2	**Audi 90**					
	Toyota Supra					
	New G20					

❑ **Compute average ratings of each car on each attribute. Submit data to a suitable perceptual mapping technique (e.g., Factor Analysis).**

❑ **Interpret the underlying key dimensions of the map using the directions of the individual attributes.**

❑ **Articulate the implications of how customers' view the competing products and concepts.**

Let's "Map" These Data

Average Consumer ratings of ten cars on several attributes

	G20	FORD	AUDI	TOYOTA	EAGLE	HONDA	SAAB	PONTIAC	BMW	MERCURY
Attractive	5.6	4.0	4.6	5.6	4.0	5.2	5.3	3.9	5.7	3.9
Quiet	6.3	3.6	5.2	4.2	3.5	5.4	4.8	2.8	5.0	3.3
Unreliable	2.9	4.2	3.7	2.0	4.3	3.2	3.7	3.9	2.3	4.0
Poorly_built	1.6	4.2	2.6	2.1	4.3	2.8	2.8	4.4	1.8	4.3
Interesting	3.6	5.0	4.0	4.3	3.9	3.4	3.4	5.4	3.3	3.9
Sporty	4.1	4.9	3.8	6.2	4.9	5.1	4.3	5.7	4.1	5.2
Uncomfortable	3.2	4.0	2.4	3.7	4.0	3.3	2.5	4.3	3.5	4.4
Roomy	4.2	3.9	5.3	3.5	3.6	3.9	5.8	3.3	4.3	3.6
Easy_Service	4.6	4.9	3.5	4.9	4.6	5.0	3.8	4.7	4.1	4.6
Hi_prestige	5.4	3.5	5.6	5.3	2.8	4.7	5.4	3.8	6.4	3.3
Common	3.5	3.6	3.4	2.9	4.3	3.9	1.9	4.3	2.8	3.9
Economical	3.6	3.7	3.6	3.2	4.9	5.0	4.3	3.1	4.3	4.6
Successful	5.3	4.2	5.0	5.5	3.7	5.6	5.3	4.4	5.9	3.9
Avant_Garde	4.3	3.6	3.6	4.9	4.4	3.9	4.7	4.1	3.7	4.5
Poor_value	3.4	4.3	4.3	3.5	3.6	2.6	2.9	4.3	3.3	3.8
Preference	6.3	3.9	6.0	5.5	4.0	6.5	6.8	3.0	6.7	4.0

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Mapping Techniques

- ❑ **Mapping perceptions**
  - ▪ **Attribute-ratings methods (particularly useful for functional products)**
  - ▪ **Overall-similarity methods (particularly useful for image-oriented products)**
- ❑ **Mapping preferences**
  - ▪ **Include an overall preference vector in a perceptual map**
  - ▪ **"External" analysis to fit preferences of individuals on a common perceptual map**
- ❑ **Joint-Space Maps**
  - ▪ Includes both customer perceptions and preferences

Attribute-Based Methods

- ❑ **Objective: Construct perceptual maps from data consisting of customer evaluations of products along pre-specified dimensions.**
- ❑ **Step 1:** Identify the set of products and the attributes on which those products will be evaluated
  - ▪ Strategic vs, tactical positioning (Pg: 129–130)
- ❑ **Step 2:** Obtain perception data
  - ▪ Homogenous sample of customer (same group or segment)
- ❑ **Step 3:** Select perceptual mapping method
  - ▪ Factor analysis
- ❑ **Step 4:** Interpreting factor analysis output
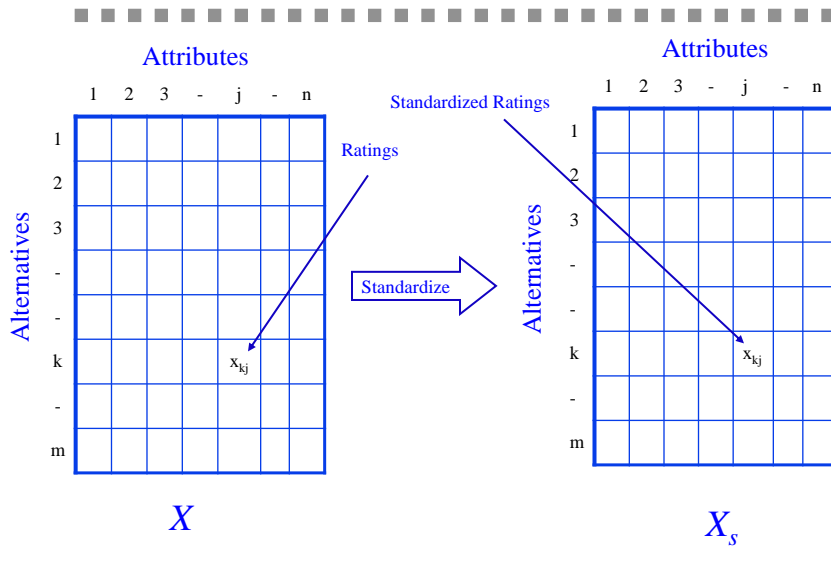 - ▪ Factor-loading matrix **F**

Factor Analysis

❑ Examine the interrelationships among a large number of variables and then attempt to explain them in their common underlying dimensions (components or factors)

❑ The number of variables can be reduced while maintaining as much of the original info as is possible (accounting for most of the variance in the data)
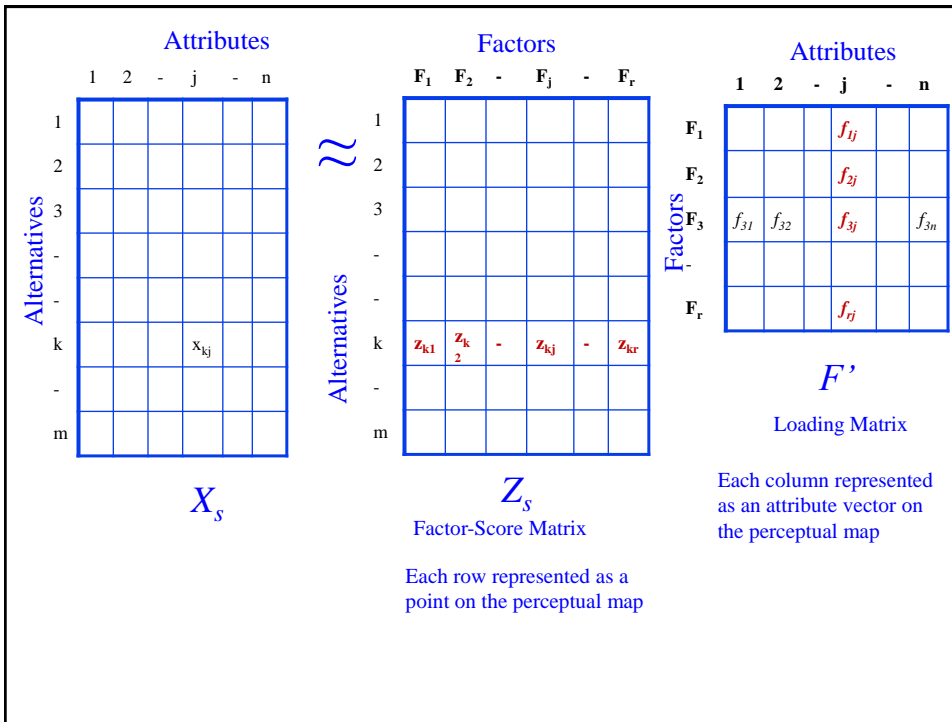
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Hi_prestige	5.4	3.5	5.6	5.3	2.8	4.7	5.4	3.8	6.4	3.3
Common	3.5	3.6	3.4	2.9	4.3	3.9	1.9	4.3	2.8	3.9
Economical	3.6	3.7	3.6	3.2	4.9	5.0	4.3	3.1	4.3	4.6
Successful	5.3	4.2	5.0	5.5	3.7	5.6	5.3	4.4	5.9	3.9
Avant_Garde	4.3	3.6	3.6	4.9	4.4	3.9	4.7	4.1	3.7	4.5
Poor_value	3.4	4.3	4.3	3.5	3.6	2.6	2.9	4.3	3.3	3.8
Preference	6.3	3.9	6.0	5.5	4.0	6.5	6.8	3.0	6.7	4.0

Factor Analysis

■ ■

Attributes

Attributes

1 2 3 - j - n

1 2 3 - j - n

Standardized Ratings

Ratings

Alternatives

Alternatives

1
2
3
-
-
k x_{kj}
-
m

Standardize

1
2
3
-
-
k x_{kj}
-
m

X

X_s

■ ■

❑ (To standardize a column, for each value we subtract the mean of all values on that attribute and divide by the standard deviation of the values.

❑ By standardizing we remove the effect of the measurement scale and ensure that all variables are treated equally in the analysis—i.e., it would not matter whether income is measured in dollars or pesos.)

Factor Analysis

- Denote the columns of $\boldsymbol{X_s}$ as $x_1, x_2, x_3, ---, x_n$
- Express each factor as a linear combination of attributes
- $F_j = a_{j1}x_1 + a_{j2}x_2 + \ldots + a_{jn}x_n$

Factor Analysis

- *Each value in the original data is approximated as:*
- $x_{kj} \approx z_{k1}f_{1j} + z_{k2}f_{2j} + \ldots + z_{kr}f_{rj}$
- Where:
  - a's, z_{kj}'s and f_{ij}'s are weights derived by the procedure to optimize $\boldsymbol{F_j}$
  - Optimality: The 1st factor captures as much information of the information in $\boldsymbol{X_s}$ as possible, the 2nd factor is orthogonal to the 1st and captures as much of the remaining information as possible, and so forth

Attributes

	1	2	-	j	-	n
1						
2						
3						
-						
-						
k				x_{kj}		
-						
m						

Alternatives

X_s

$\approx$

Factors

	F_1	F_2	-	F_j	-	F_r
1						
2						
3						
-						
-						
k	z_{k1}	z_{k2}	-	z_{kj}	-	z_{kr}
-						
m						

Alternatives

Z_s

Factor-Score Matrix

Each row represented as a point on the perceptual map

Attributes

	1	2	-	j	-	n
F_1				f_{1j}		
F_2				f_{2j}		
F_3	f_{31}	f_{32}		f_{3j}		f_{3n}
-						
F_r				f_{rj}		

Factors

F'

Loading Matrix

Each column represented as an attribute vector on the perceptual map

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■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■

❑ fij➔ **The correlation between attribute *j* and factor *i* (this gives the angle (cosin) between the vectors)**

❑ *(zk1,zk2 zkr)= location of brand k in the rD space of factors*

❑ **Proportion of variance explained for attribute *j*= $f_{1j}^{\,2}$ ....$f_{rj}^{\,2}$**

❑ **(this gives the length of the attribute vector)**

Example Positioning Statements

For [*target segment*], the [*product/concept*] is [*most important claim*] **because** [*single most important support*].

Iomega

➢ For [PC Users], the IOMEGA Zip drive is the best available portable storage device because it is [the most cost-effective system].

Example Positioning Statements

For [*target segment*], the [*product/concept*] is [*most important claim*] **because** [*single most important support*].

J. C. Penney

➢ For "Modern Spenders" and "Starting Outs," in mid-income levels who shop for apparel, accessories, and home furnishings we offer private-label, supplier exclusive, and national brands that deliver greater value than that of our competition because of our unique combination of quality, selection, fashion, service, price, and shopping experience.

Example Positioning Statements

■ ■

For [*target segment*], the [*product/concept*] is [*most important claim*] because [*single most important support*].

Pantene

➤ **For [females 18-49 who possess dry damaged hair and believe they cannot achieve truly healthy/shiny hair] Pantene is a [hair care system (shampoo/conditioner/ styling aids)] that offers ["hair so healthy it shines"] because it ["penetrates from root to tip" through its patented Pro-Vitamin B5 formula].**

Example Positioning Statements

■ ■

For [*target segment*], the [*product/concept*] is [*most important claim*] because [*single most important support*].

Microsoft .NET

➤ **For [*companies whose employees and partners need timely information*], Microsoft.NET is a [*new protocol and software system*] that enables [*unprecedented levels of software integration through XML Web services*], because [*unlike Java, .NET is infused into the Microsoft platform, providing the ability to quickly and reliably build, host, deploy, and utilize connected applications*].**

Limitations

- **Provides a static model - ignores dynamics of customer perceptions.**
- **Interpretation is sometimes difficult.**
- **Does not incorporate cost or likelihood of being able to achieve a desired positioning.**
- **Does not incorporate a "probability model" to indicate goodness of a map.**
- **Generally, need about 6 to 8 products in a category to make the technique useful.**

Perceptions Vs. Preferences

- Perceptions are fundamentally different from preferences

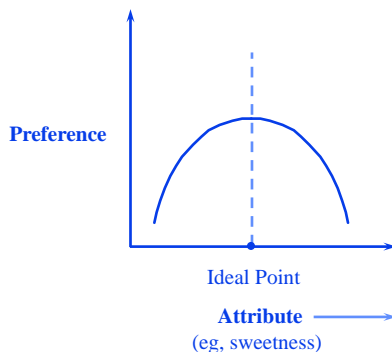- Customers may see Volvo as the safest car, but they may also have a low preference for it.

- ❑ Unlike perceptions preferences do not necessarily increase or decrease monotonically with increases in the magnitude of an attribute.

- ❑ In some cases (e.g., sweetness of soft drink) each customer has an ideal level of the attribute above or below which a product becomes less preferred.

- ❑ In other cases customers always prefer more of the attribute (e.g., quality of a TV set) or always prefer less of an attribute (e.g., waiting time before a car is repaired).
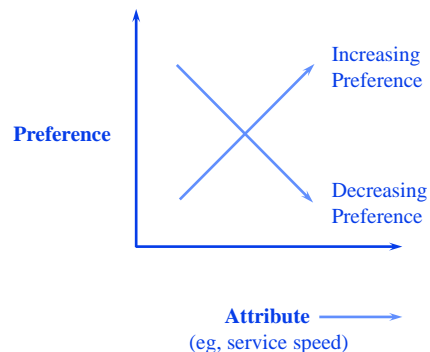
Two Preference Models

Ideal-Point Preference Model

Vector Preference Model

Preference

Preference

Increasing Preference

Decreasing Preference

Ideal Point

Attribute ⟶
(eg, sweetness)

Attribute ⟶
(eg, service speed)

Simple joint-space maps

- ❑ The simplest way to incorporate preferences in a map is to introduce a hypothetical ideal brand into the set of alternatives that customers evaluate in the attribute-based mapping model.

- ❑ For each respondent, an ideal brand has that individual's most preferred combination of attributes.

- ❑ Assuming that both the perceptions and the preferences of customers in a target segment are fairly homogeneous, we can find the location of the "average" ideal brand using either similarity-based or attribute-based methods.
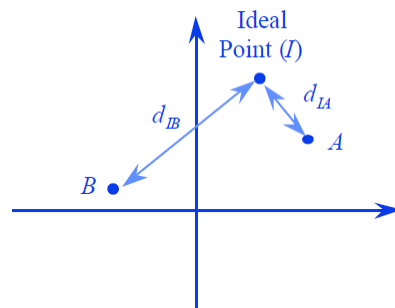
❑ The ideal brand thus becomes simply another alternative that customers evaluate.

❑ In the resulting map, locations that are farther away from the ideal point (location of the ideal brand) are less desirable to customers than locations closer to the ideal point

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Distance of a brand from the ideal-brand on the map is a measure of preference for the brand

❑ B:

❑ is twice as far from the ideal point as alternative A,

❑ is preferred half as much as A.

Ideal Point (I)

d_{IB}

d_{IA}

A

B

A is preferred twice as much as B.
$(d_{IB} = 2d_{IA})$

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❑ Another way to include preferences in attribute-based models is to add an attribute called "preference" on which customers rate all the alternatives to indicate their preferences for these alternatives.

Example: Positioning American Airlines in a New Market

	Poor							Excellent	
Convenience	1	2	3	4	5	6	7	8	9
Punctuality	1	2	3	4	5	6	7	8	9
Service	1	2	3	4	5	6	7	8	9
Quality	1	2	3	4	5	6	7	8	9

Measure preferences also…

	Low				High				
Likelihood of use	1	2	3	4	5	6	7	8	9

When we aggregate and average these preference ratings, we can treat the average ratings as an additional row in the input data matrix to represent an attribute called "preference."

❑ The map we generate from this modified data set then includes a preference vector to indicate the direction of increasing preference.

❑ An alternative positioned farther along this vector is one for which customers have greater preference.

❑ Preference vector indicates the direction in which preference is increasing in the map.

▪ Helps identify which attributes influence consumer preferences

▪ Helps identify which brands are most preferred in the aggregate

❑ Suppose that alternative A is farthest along the preference vector.

❑ Then if B is half as far from A as C is from A along the preference vector, customers prefer B twice as much as C
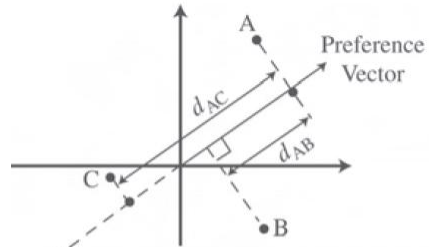
Vector Map
A is preferred to B and
B is preferred to C.
With reference to A, C
is preferred half as much as B.
$(d_{AC} = 2d_{AB})$
(b)

❑ The preference vector shows that customer preference

❑ increases with improvements in

  ▪ screen quality

  ▪ perceived value of the product

❑ decreases with lower levels of battery life.

□ In this example the two-dimensional map recovered over 80% of the variance in the preference "attribute."

- Short battery life
- Keyboard
- Toshiba
- Expandability
- Distinctiveness
- Avant-Garde
- Toshiba_new
- Elegant
Unsuccessful
Heavy
- IBM
- Compaq
- Sanyo
- TI
- Good design
- Difficult to use
- AST Exec
- Poor setup
- Dell
- NEC
- Samsung
- Value
- Graphics
- Screen quality
- Preference

□ Overall preference for notebook computers increases with screen quality, value, and long battery life but is unaffected by expandability, keyboard, and ease of use.