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## Modeling the Retail Servicescape: a Second Order Factor Solution

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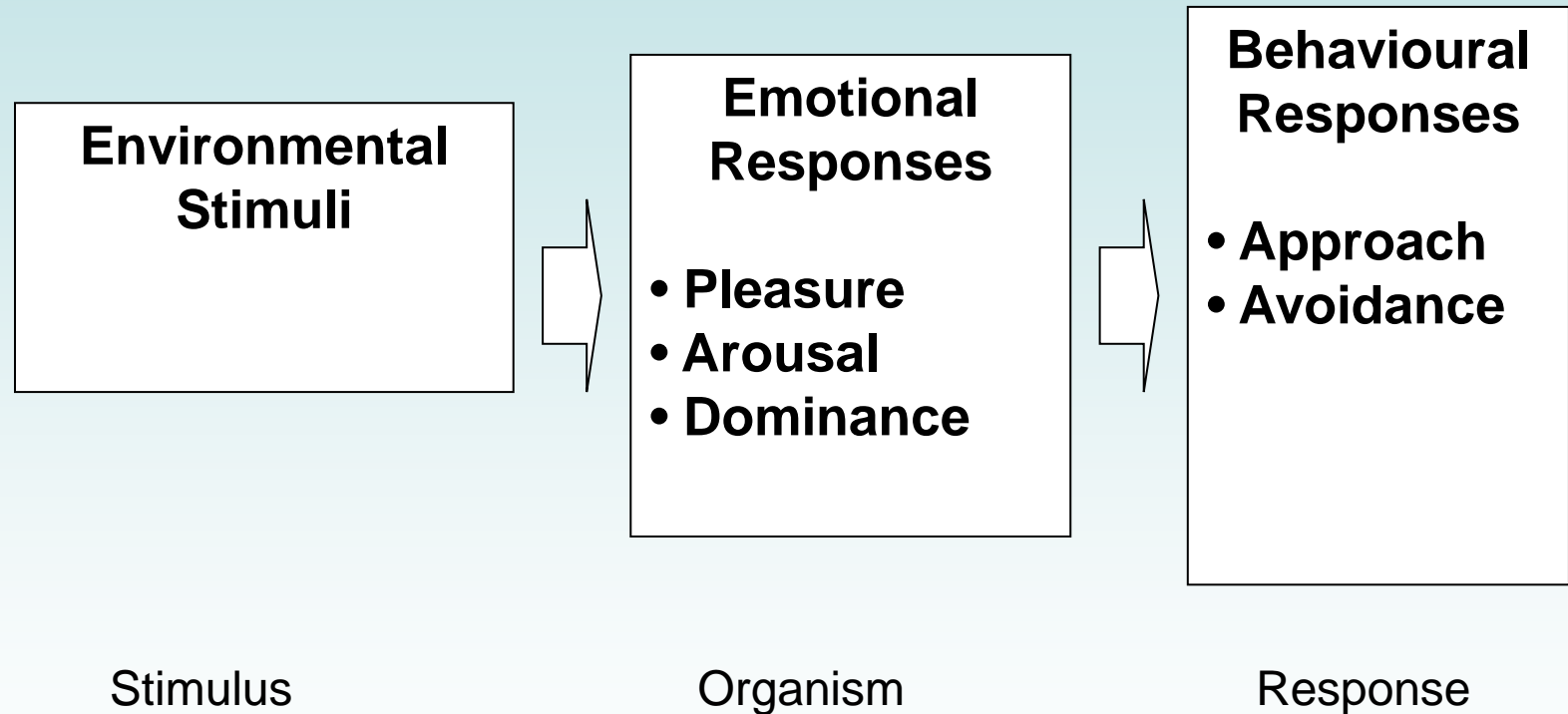


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# Modeling the Retail Servicescape: A Second Order Factor Solution

Daire Hooper  
Joseph Coughlan

# Mehrabian and Russell's (1974) Theory of Environmental Psychology




# Three Divergent Research Streams: One Over-Arching Theory

- Atmospheric
- Direct Applications of M-R Model
- Multi-Dimensional Approaches

# Atmospherics Literature

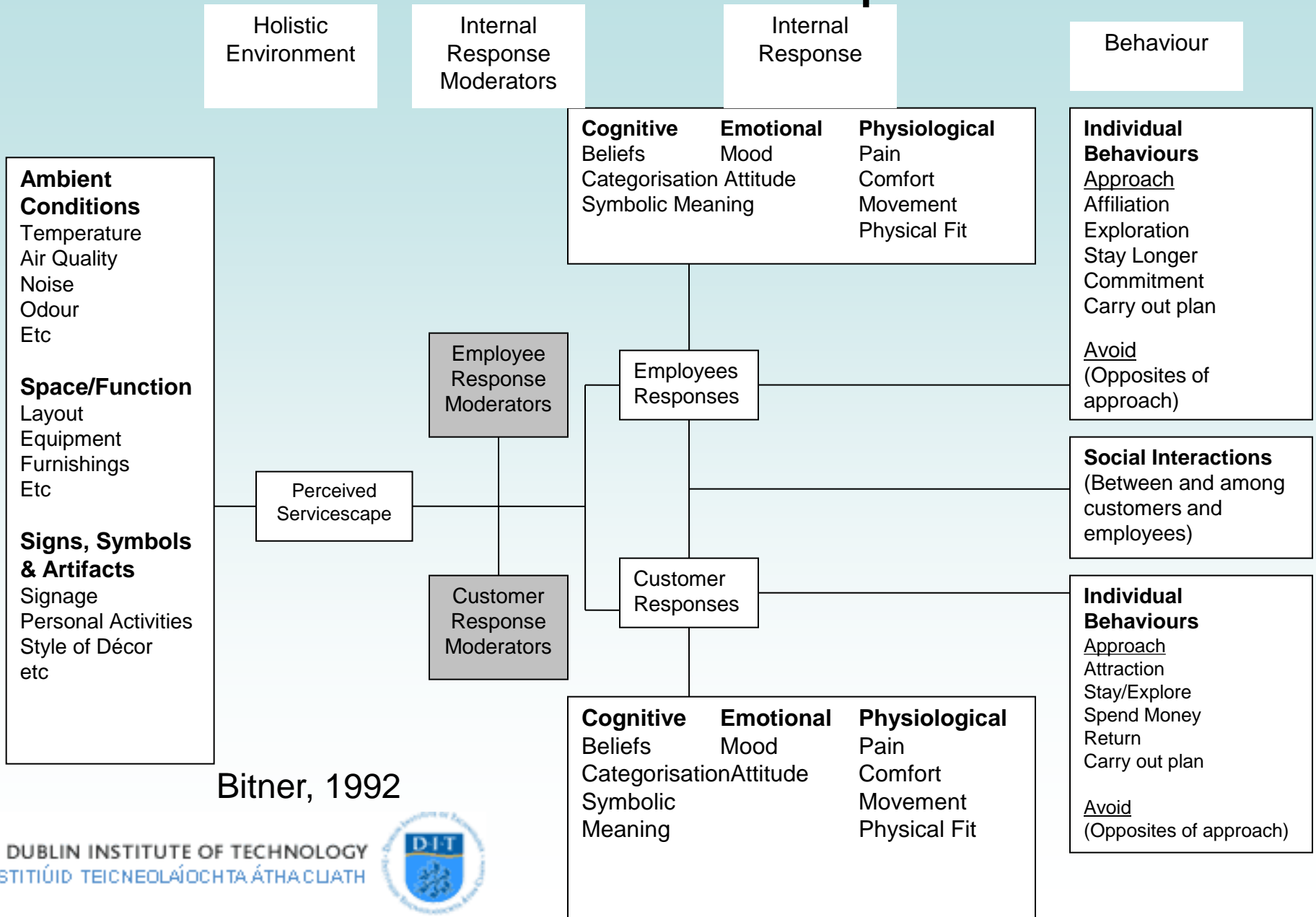
- Isolated specific environmental stimuli:
  - Music
  - Colour
  - Lighting
  - Odour
- Heavy focus on experimental methods



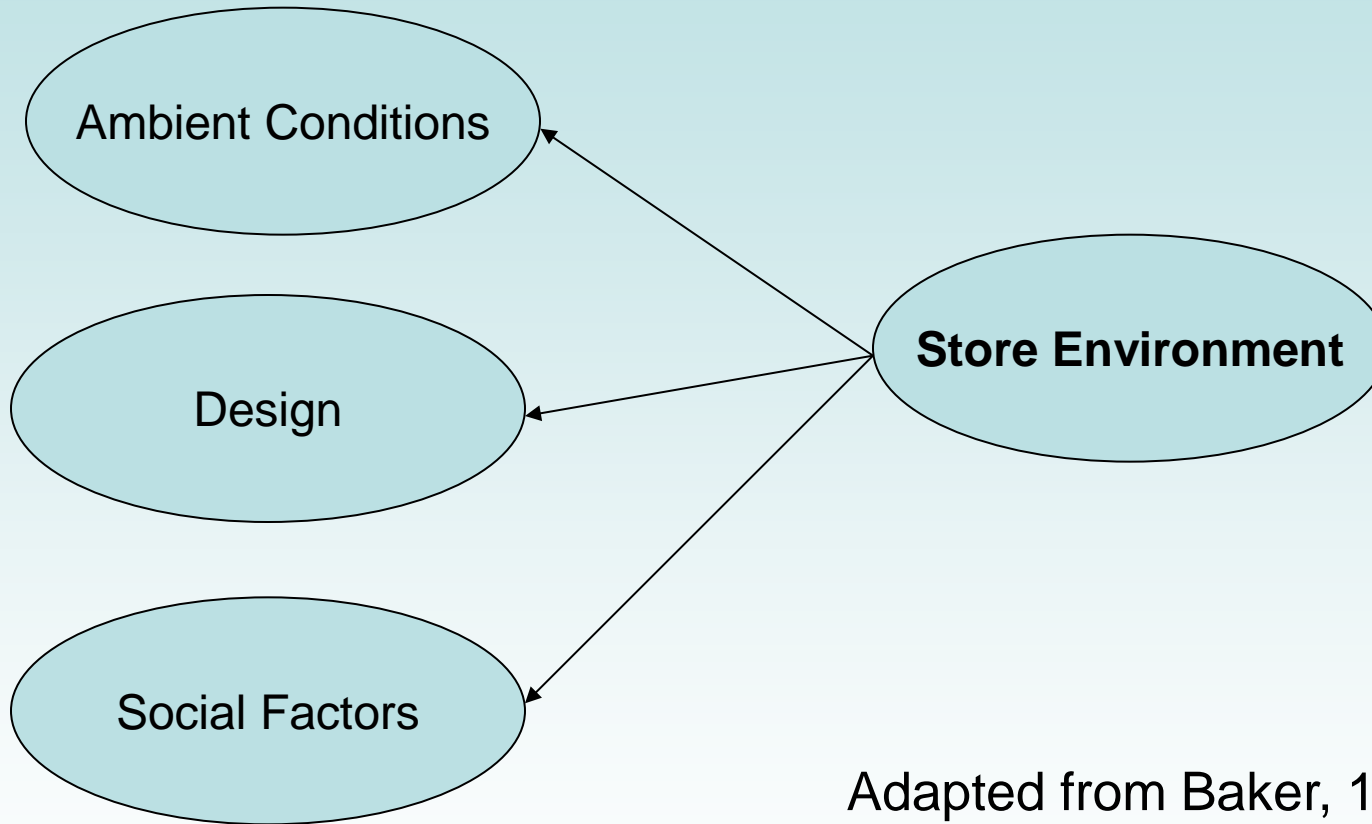
# Direct Applications of Mehrabian and Russell's (1974) Model

- Donovan and Rossiter (1982)
  - Information load → Pleasure, Arousal & Dominance → approach/avoidance behaviours
  - Student samples
- Follow up study
  - Donovan et al (1994)

# Multi-Dimensional Conceptualisations



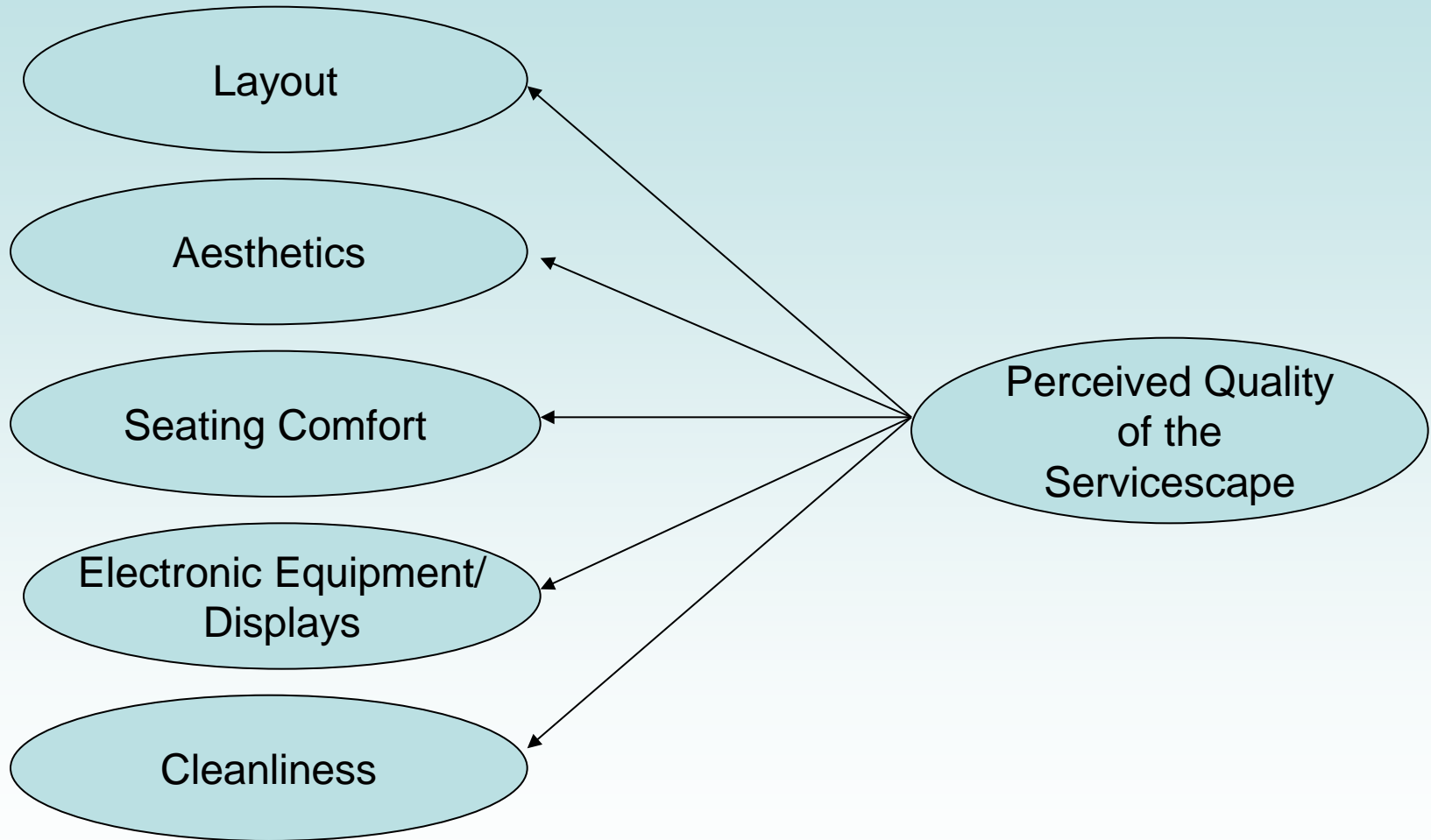
# Multi-Dimensional Conceptualisations



Adapted from Baker, 1987



# Multi-Dimensional Conceptualisations

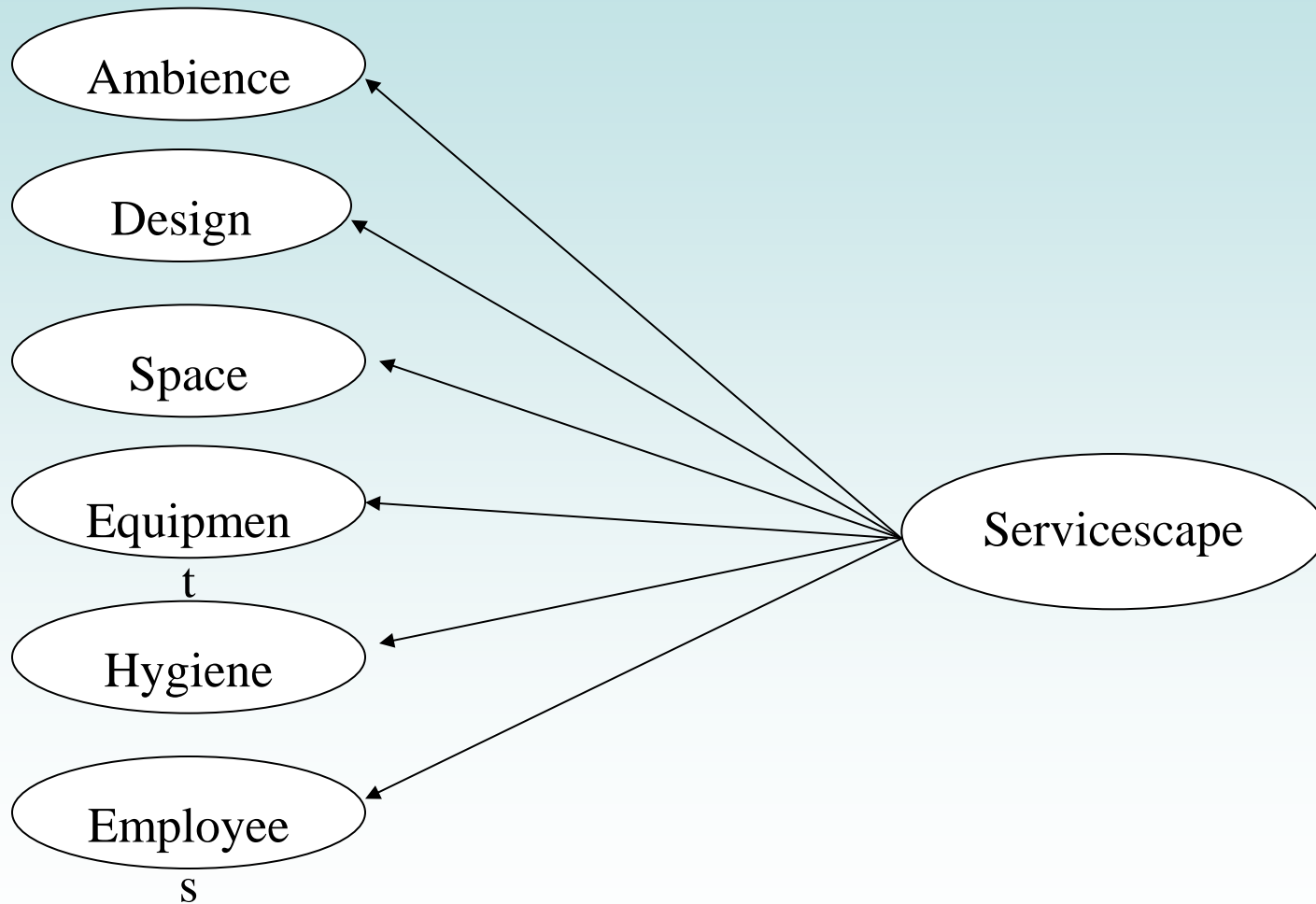


Wakefield and Blodgett, 1996

# Multi-Dimensional Conceptualisations

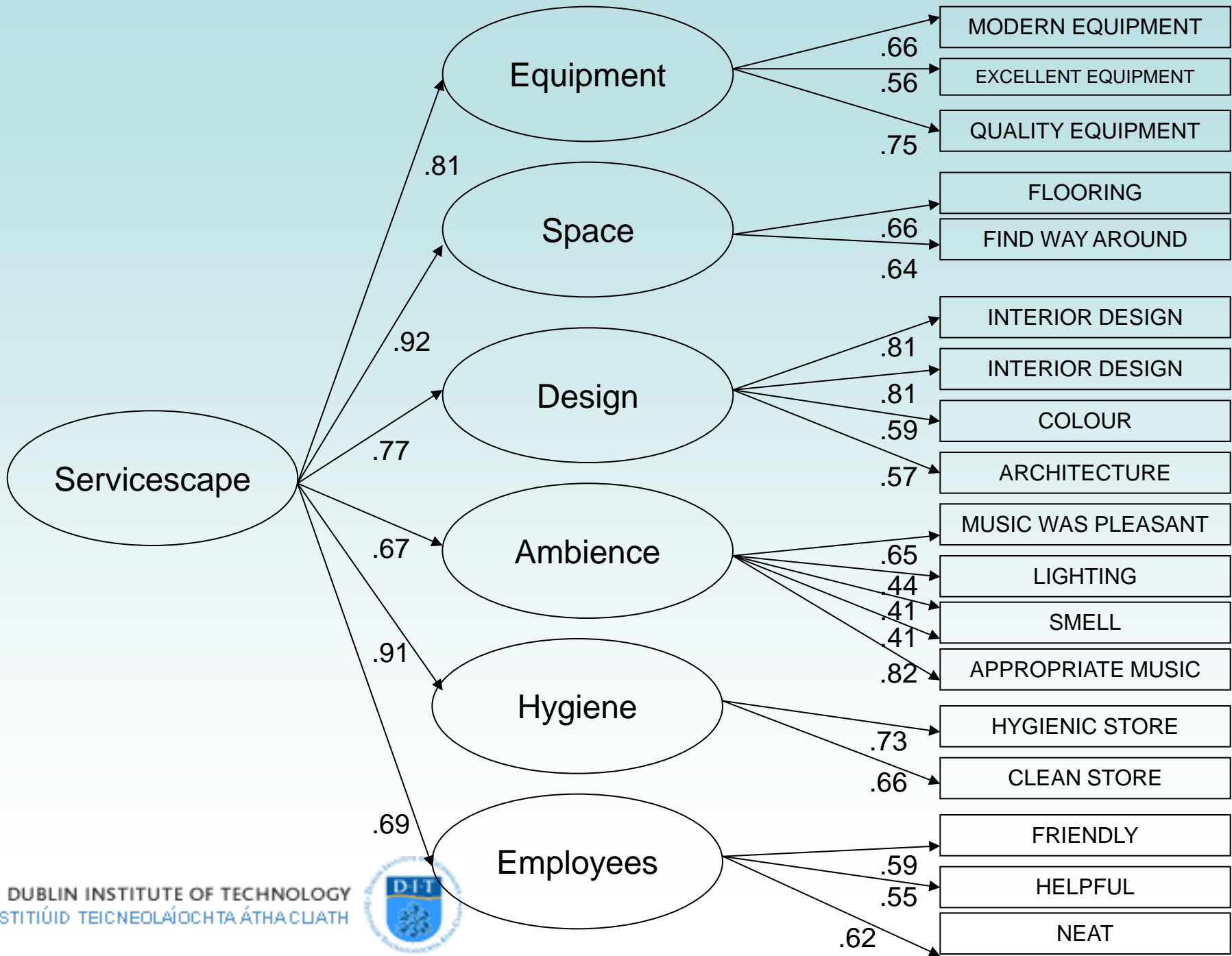
- Limitations to the Literature
  - Arbitrary choice of dimensions
    - Context specific
    - Questionable environmental stimuli
  - No cohesive servicescape structure proposed to date

# Confirmatory Factor Analysis: Proposed Second Order Model



# Methodology and Study Design

- Service Stations
  - Retail Environment
- Intercept technique
- $n = 355$



Hypothesised Path	Standardised Path Coefficients	t Value	Hypothesis
Servicescape → Equipment	0.81	11.83*	Supported
Servicescape → Space	0.92	11.09*	Supported
Servicescape → Design	0.77	9.57*	Supported
Servicescape → Ambience	0.67	8.58*	Supported
Servicescape → Hygiene	0.91	11.19*	Supported
Servicescape → Employees	0.69	7.40*	Supported

$$X^2 (129) = 403.82 \quad p = 0.00$$

$$X^2/df = 3.13$$

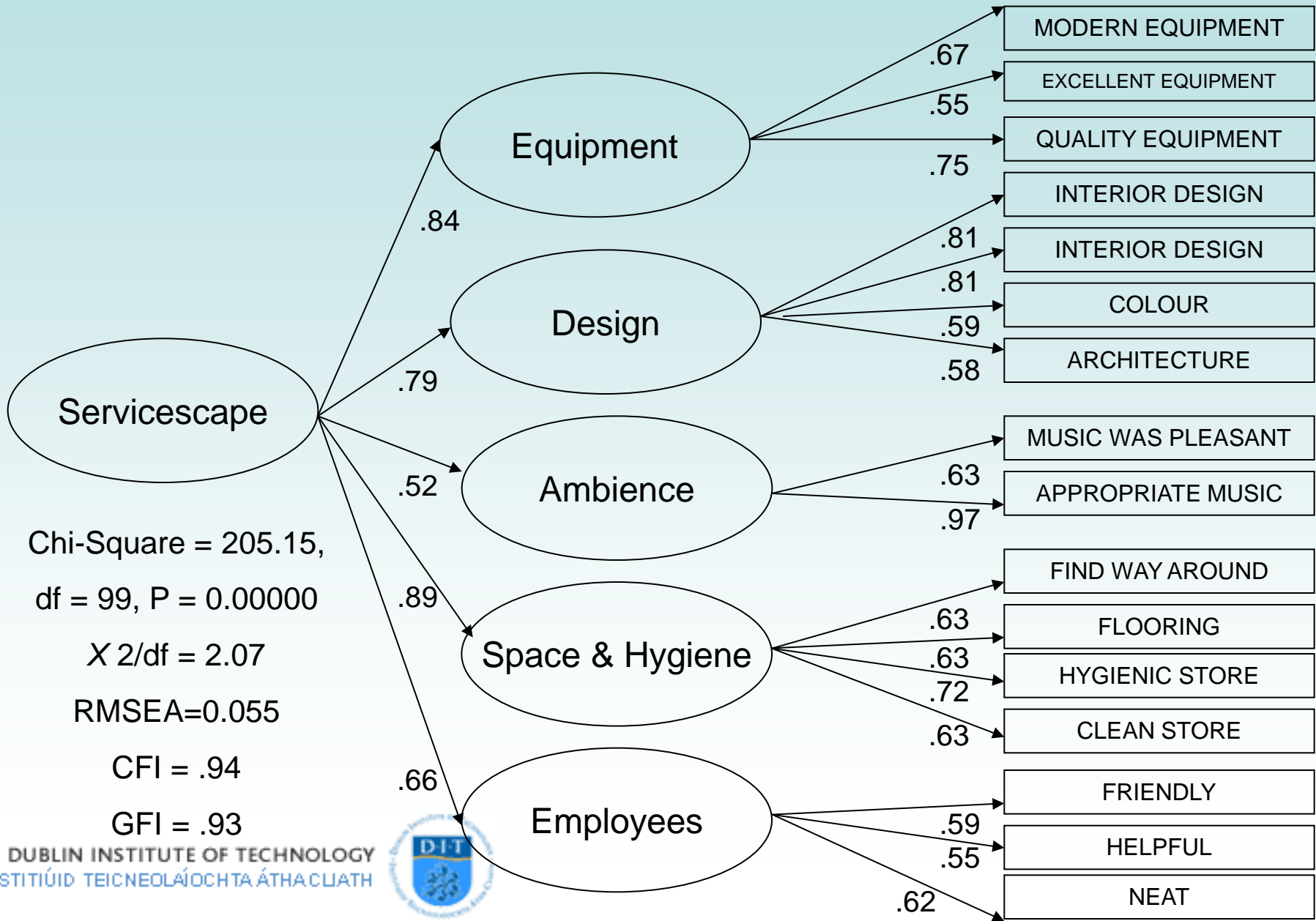
RMSEA: 0.078

CFI = 0.86

GFI = 0.89

\* =  $p < .01$

# Respecified Second Order Factor Model



Chi-Square = 205.15,

df = 99, P = 0.00000

$\chi^2/df = 2.07$

RMSEA=0.055

CFI = .94

GFI = .93



# Model Discussion

- Hygiene and Space contribute most of the variance in the Servicescape construct
- Empirical confirmation that the Servicescape is a multi-dimensional structure
- Utilitarian dimensions seem to have a greater impact on the Servicescape



# Alternative Conceptualisations of the Servicescape

## Baker's model (1987)

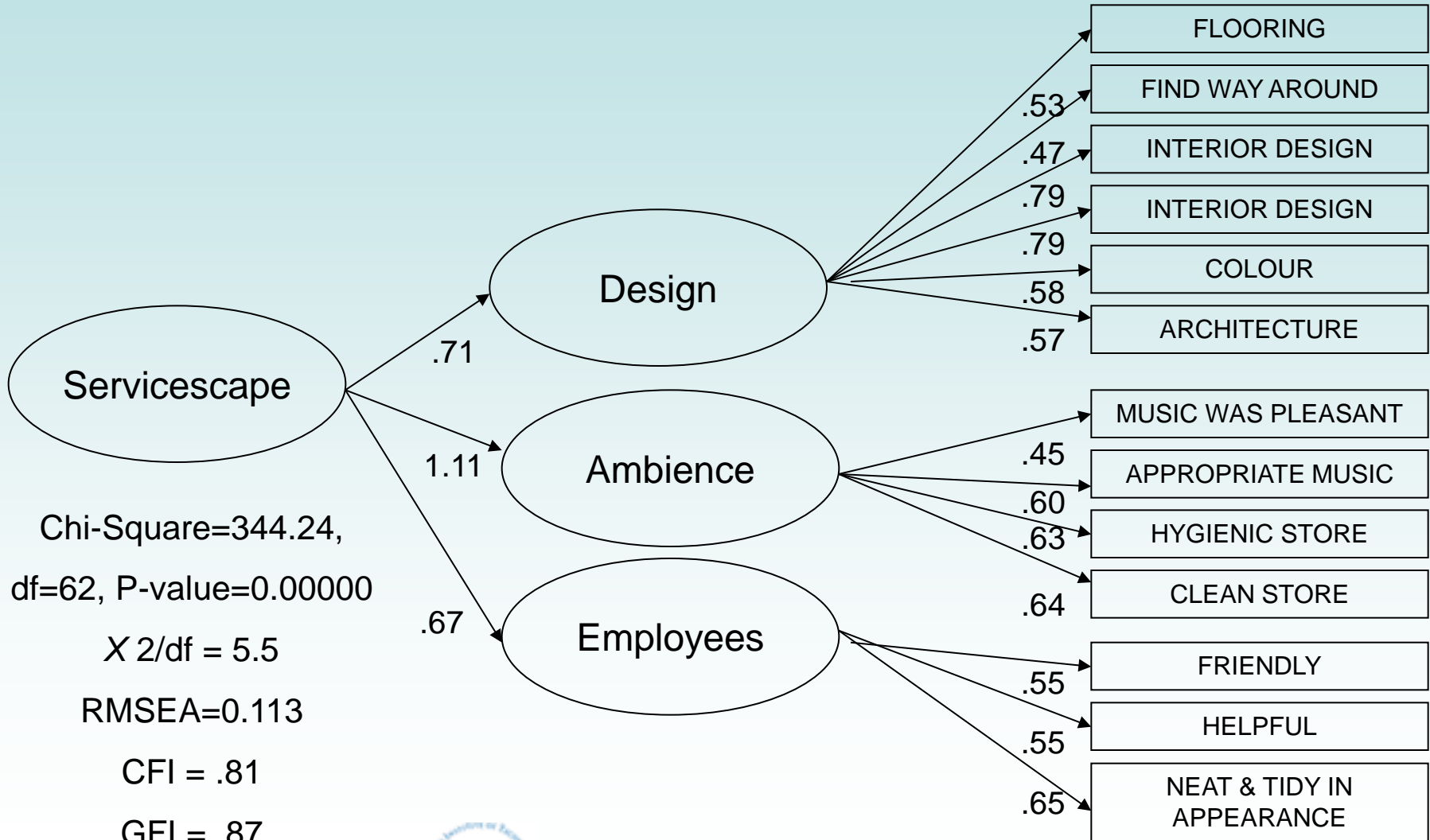
## Bitner's model (1992)

<p><b>Ambient Conditions</b></p> <p>Temperature Air Quality Noise Scent Cleanliness</p>	<p><b>Design</b></p> <p>Architecture Colour Materials Shape Style Layout Comfort Signage</p>	<p><b>Social Factors</b> (Other Customers)</p> <p>Number Appearance Behaviour (Service Personnel)</p> <p>Number Appearance Behaviour</p>	<p><b>Ambient Conditions</b></p> <p>Temperature Air Quality Noise Odour</p>	<p><b>Space &amp; Function</b></p> <p>Layout Equipment Furnishings</p>	<p><b>Signs, Symbols &amp; Artifacts</b></p> <p>Signage Personal Activities Style of Décor</p>
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# Items used to test Baker's Model

<b>Ambient Conditions</b>
The background music was pleasant
The lighting was comfortable
The atmosphere was comfortable
The store had a pleasant smell
The background music was appropriate
The store was very clean
The service station appeared to be hygienic
<b>Design</b>
I found the interior design visually appealing
The interior design was attractive
The colour schemes were pleasant
The materials used were of high quality
The architecture was attractive
I found the physical facilities comfortable
The flooring was appropriate
I found my way around quite easily
The interior layout was pleasing
<b>Social Factors</b>
The employees were neat and tidy in appearance
I found the staff friendly
The employees were helpful

# Baker's Model



Chi-Square=344.24,  
df=62, P-value=0.00000

$X^2/df = 5.5$

RMSEA=0.113

CFI = .81

GFI = .87



# Items used to test Bitner's Model

<b>Ambient Conditions</b>
The background music was pleasant
The lighting was comfortable
The atmosphere was comfortable
The store had a pleasant smell
The background music was appropriate
<b>Space and Function</b>
The flooring was appropriate
I found my way around quite easily
The interior layout was pleasing
<b>Signs, Symbols and Artefacts</b>
I found the interior design visually appealing
The interior design was attractive
The colour schemes were pleasant
The materials used were of high quality
The architecture was attractive
I found the physical facilities comfortable

# Bitner's Model

Chi-Square=21.86,  
df=17,

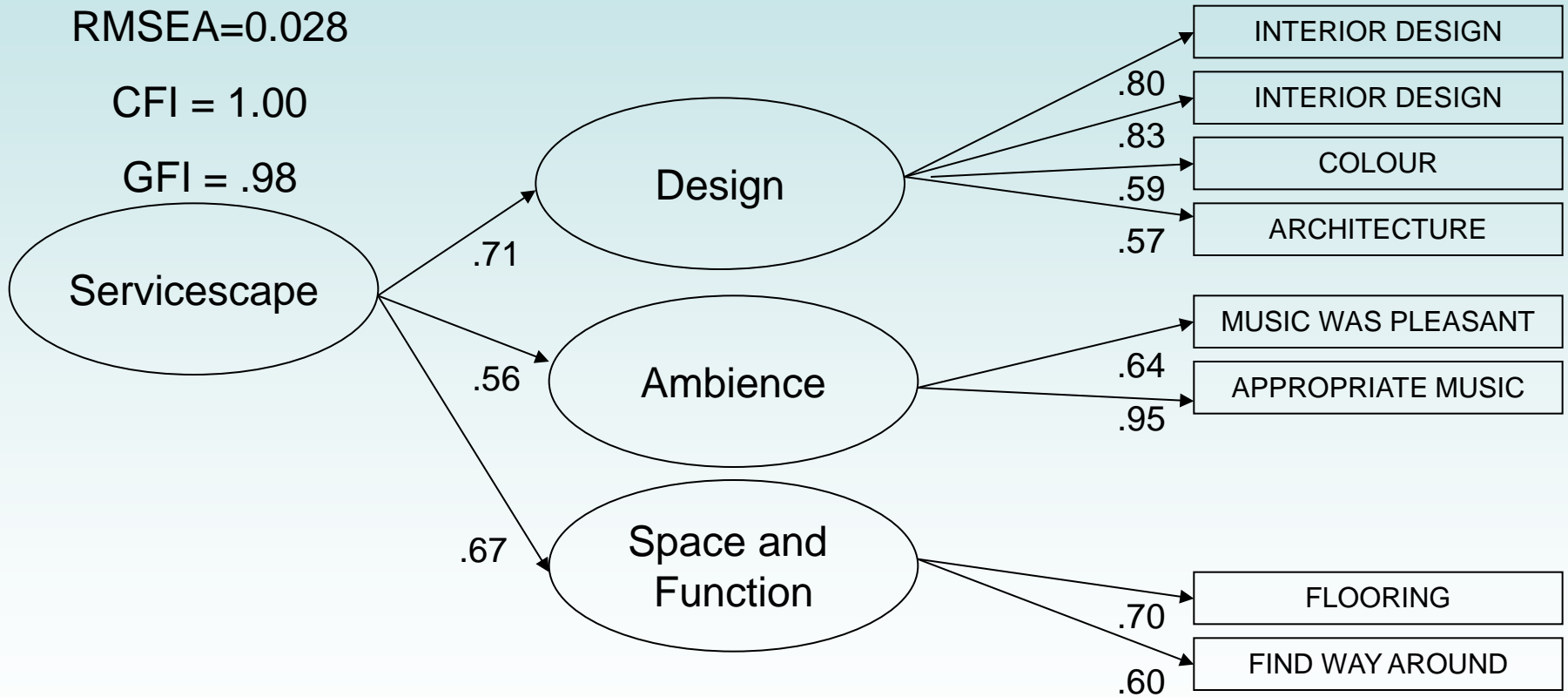
P-value=0.19022,

$\chi^2/df = 1.28$

RMSEA=0.028

CFI = 1.00

GFI = .98



<b>Fit Statistic</b>	<b>Current Model</b>	<b>Baker Model</b>	<b>Bitner Model</b>
<b><math>\chi^2</math>, df, and <math>p</math> value</b>	205.15, df = 99, $p = 0.00$	344.24, df = 62, $p = 0.00$	21.86, df = 17, $p = 0.19$
<b><math>\chi^2</math>/df ratio</b>	2.07	5.55	1.28
<b>RMSEA</b>	0.05	0.113	0.028
<b>CFI</b>	0.94	0.81	1.00
<b>NFI</b>	0.89	0.78	0.98
<b>IFI</b>	0.93	0.81	1.00
<b>SRMR</b>	0.054	0.081	0.024

# Model Discussion

- Should we allow statistics to drive theory?
  - Incompleteness of Bitner's (1992) model
- Certain key Servicescape elements omitted

# Contributions of the Current Conceptualisation

- Integrates the extant literature
- Provides a cohesive framework
- Demonstrates the limitations of previous work in the area



# Assessing the Dimensionality of the Servicescape Construct: Integrating the Extant Literature

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