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Modeling the Retail Servicescape: a Second Order Factor Solution

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

Environmental Stimuli

Emotional Responses

- **Pleasure**
- **Arousal**
- **Dominance**

Behavioural Responses

- **Approach**
- **Avoidance**

Stimulus

Organism

Response
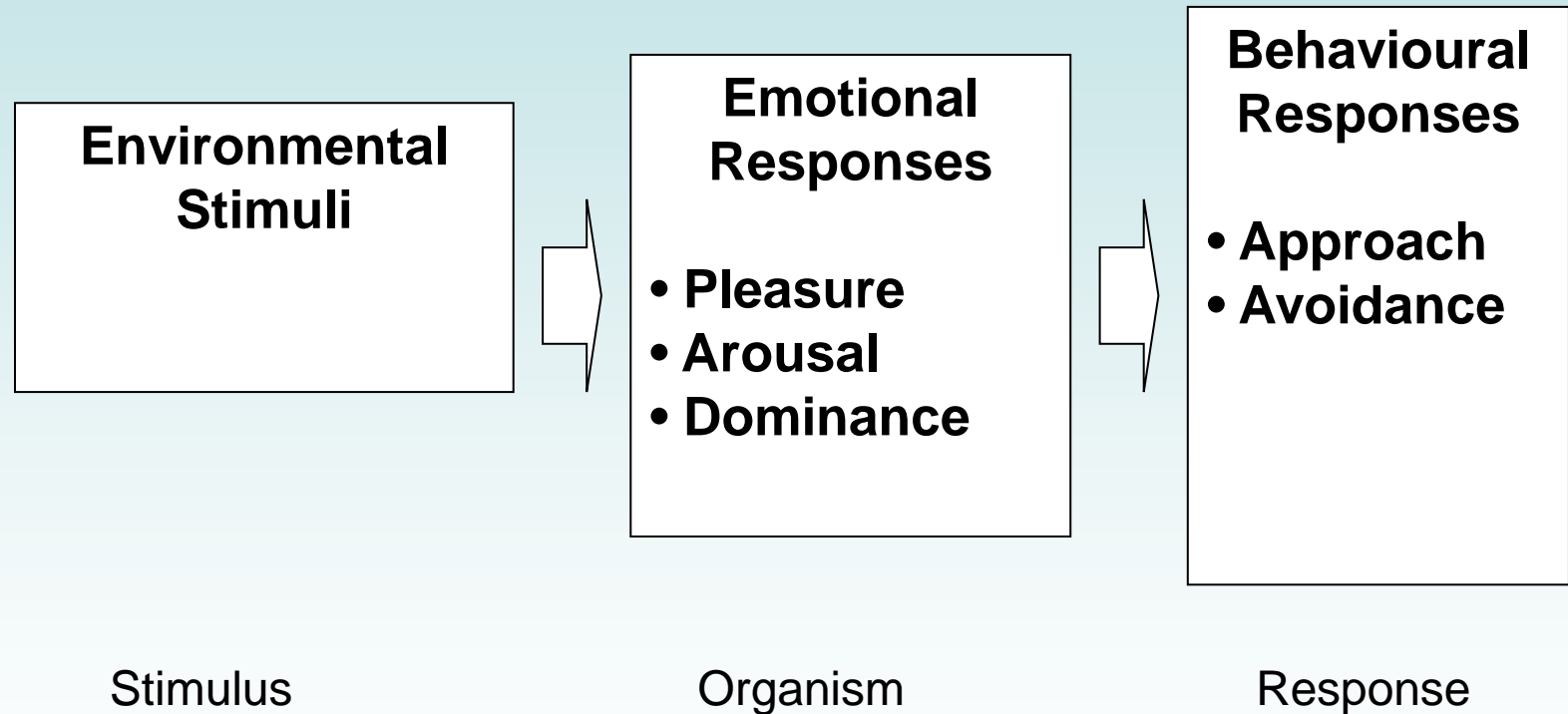
Three Divergent Research Streams: One Over-Arching Theory

- Atmospherics

- Direct Applications of M-R Model

- Multi-Dimensional Approaches
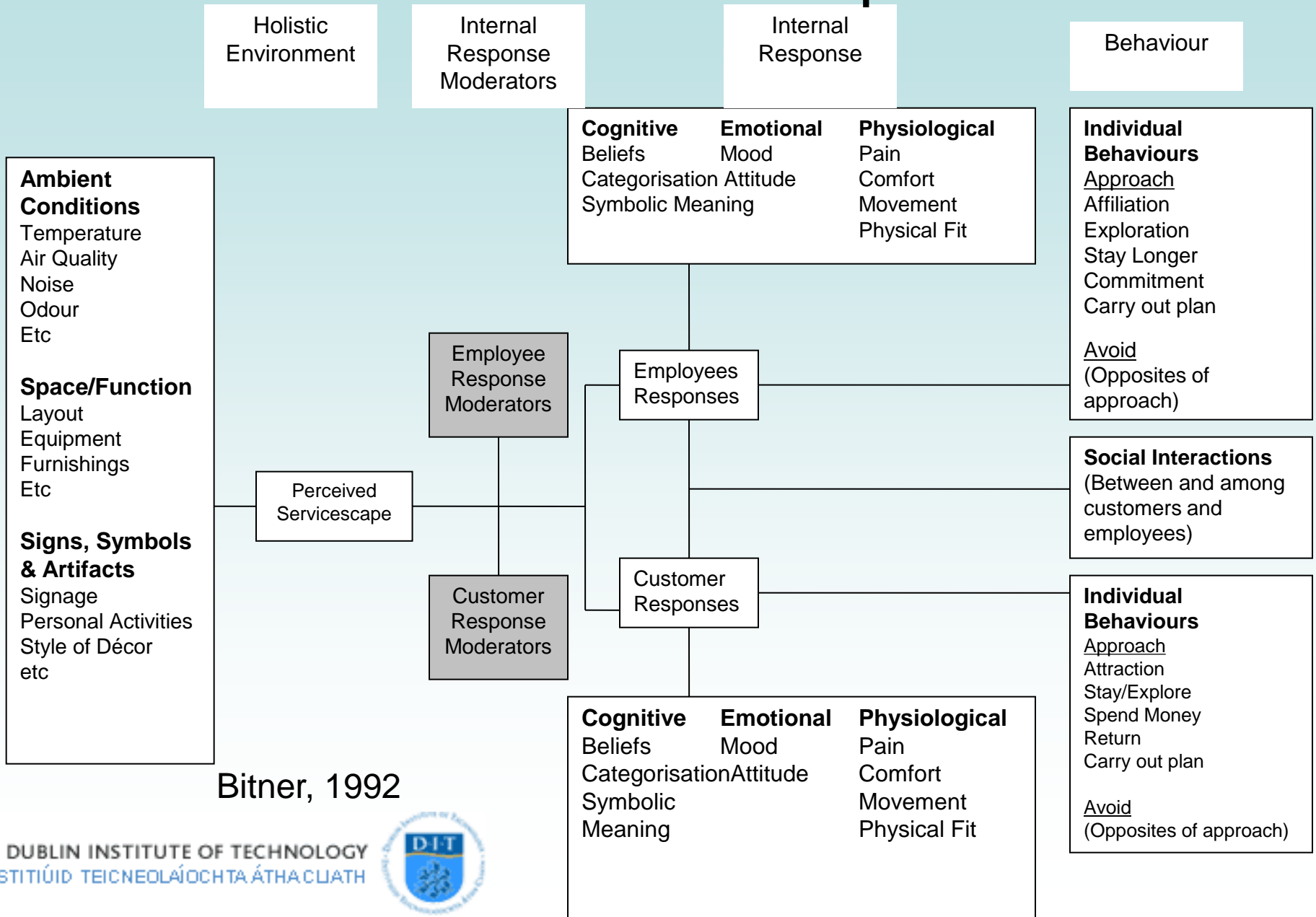
Atmospherics Literature

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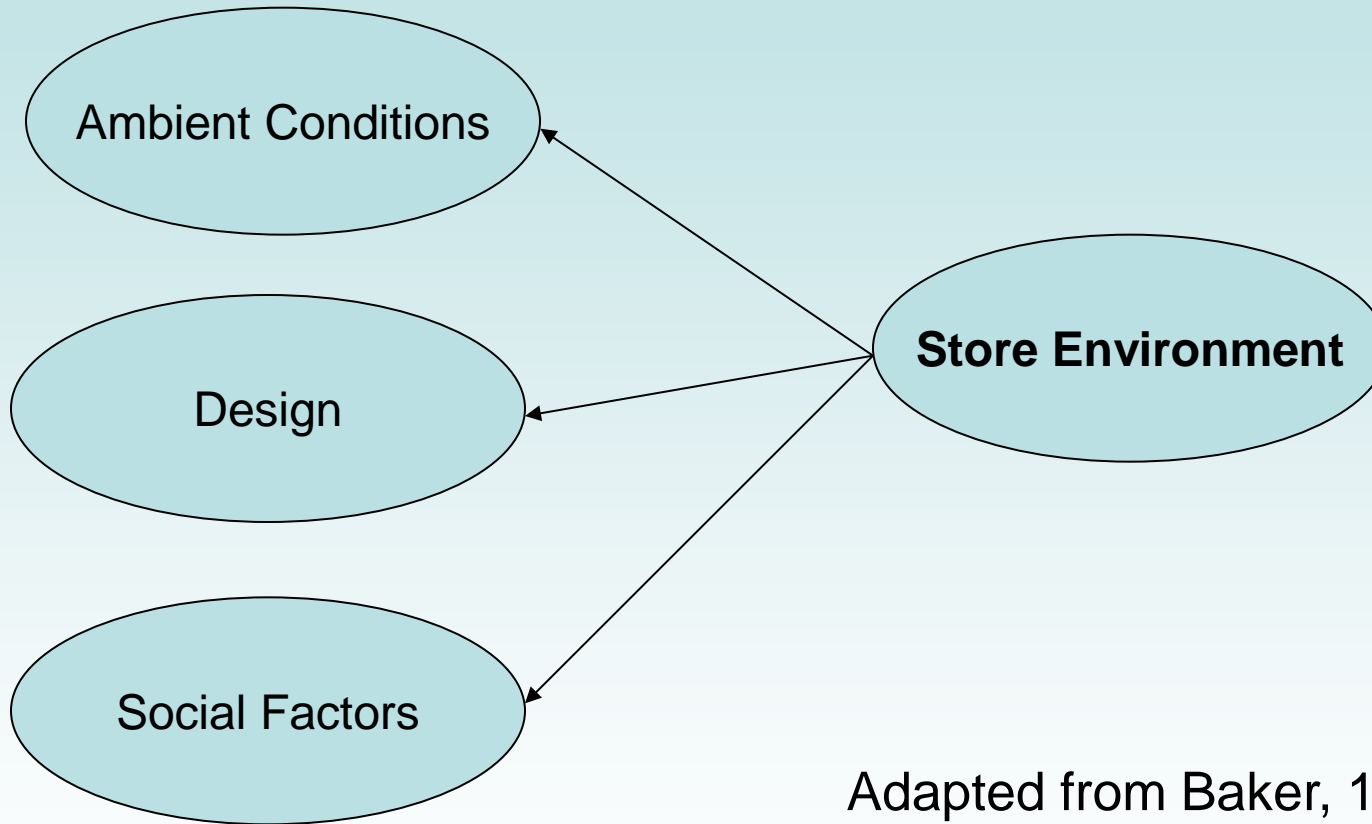- Heavy focus on experimental methods

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

| Holistic Environment | Internal Response Moderators | Internal Response | Behaviour |

Ambient Conditions
Temperature
Air Quality
Noise
Odour
Etc

Space/Function
Layout
Equipment
Furnishings
Etc

Signs, Symbols & Artifacts
Signage
Personal Activities
Style of Décor
etc

Perceived Servicescape

Employee Response Moderators

Customer Response Moderators

Employees Responses

Customer Responses

Cognitive   **Emotional**   **Physiological**
Beliefs   Mood   Pain
Categorisation Attitude   Comfort
Symbolic Meaning   Movement
   Physical Fit

Cognitive   **Emotional**   **Physiological**
Beliefs   Mood   Pain
Categorisation Attitude   Comfort
Symbolic Meaning   Movement
   Physical Fit

Individual Behaviours
Approach
Affiliation
Exploration
Stay Longer
Commitment
Carry out plan

Avoid
(Opposites of approach)

Social Interactions
(Between and among customers and employees)

Individual Behaviours
Approach
Attraction
Stay/Explore
Spend Money
Return
Carry out plan

Avoid
(Opposites of approach)

Bitner, 1992

DUBLIN INSTITUTE OF TECHNOLOGY
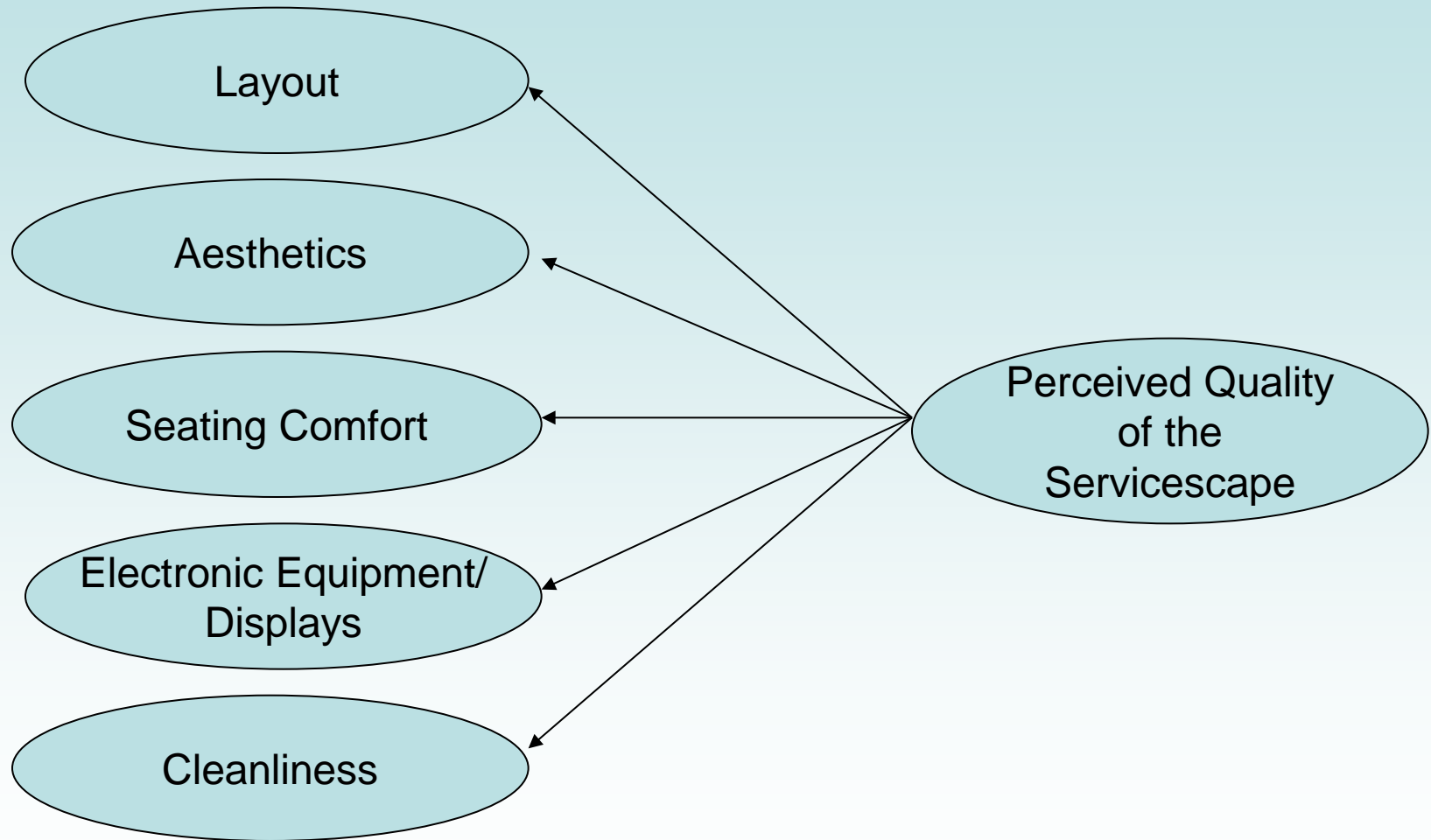INSTITIÚID TEICNEOLAÍOCHTA ÁTHA CLIATH

Multi-Dimensional Conceptualisations

Adapted from Baker, 1987
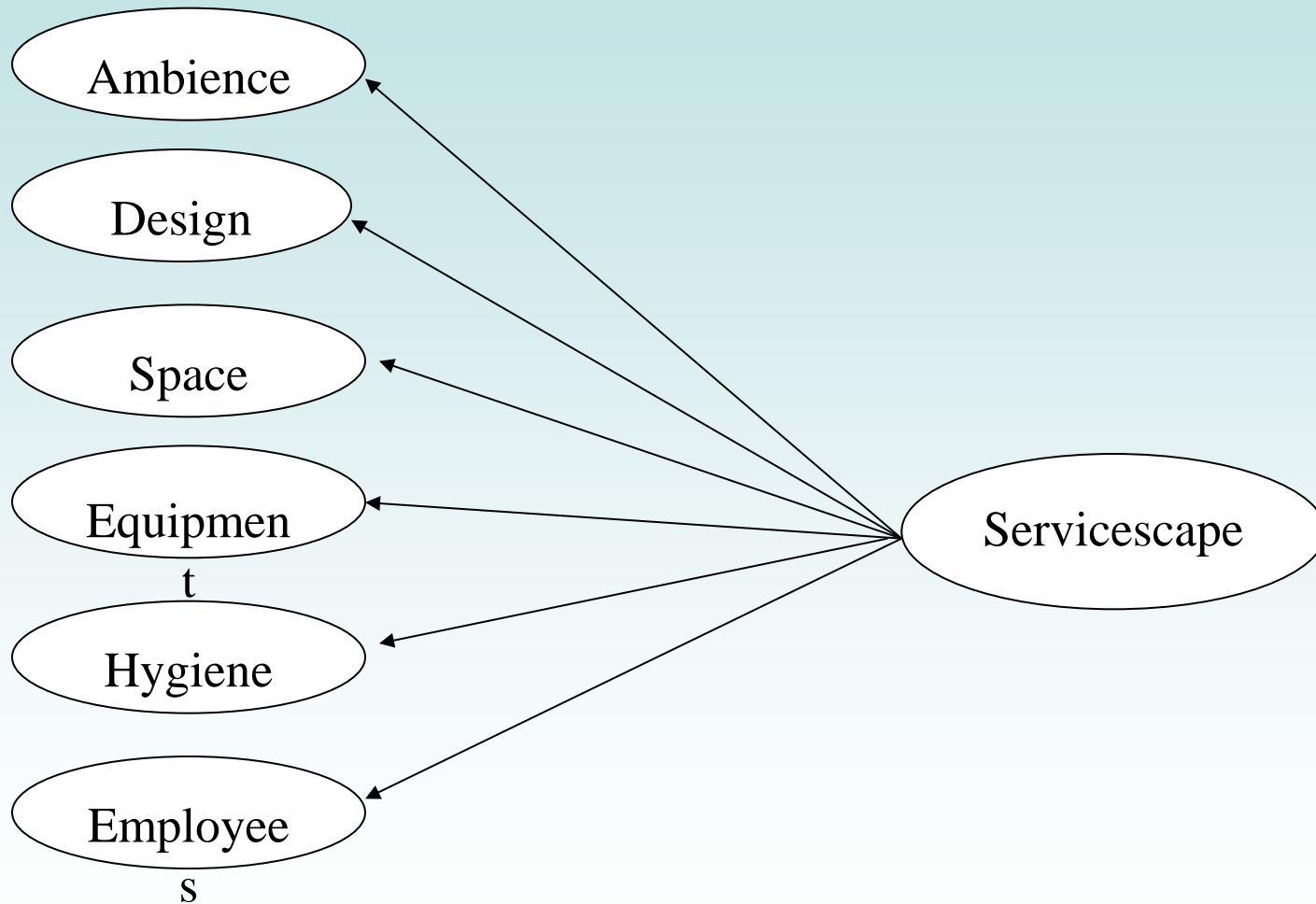
Multi-Dimensional Conceptualisations

Wakefield and Blodgett, 1996

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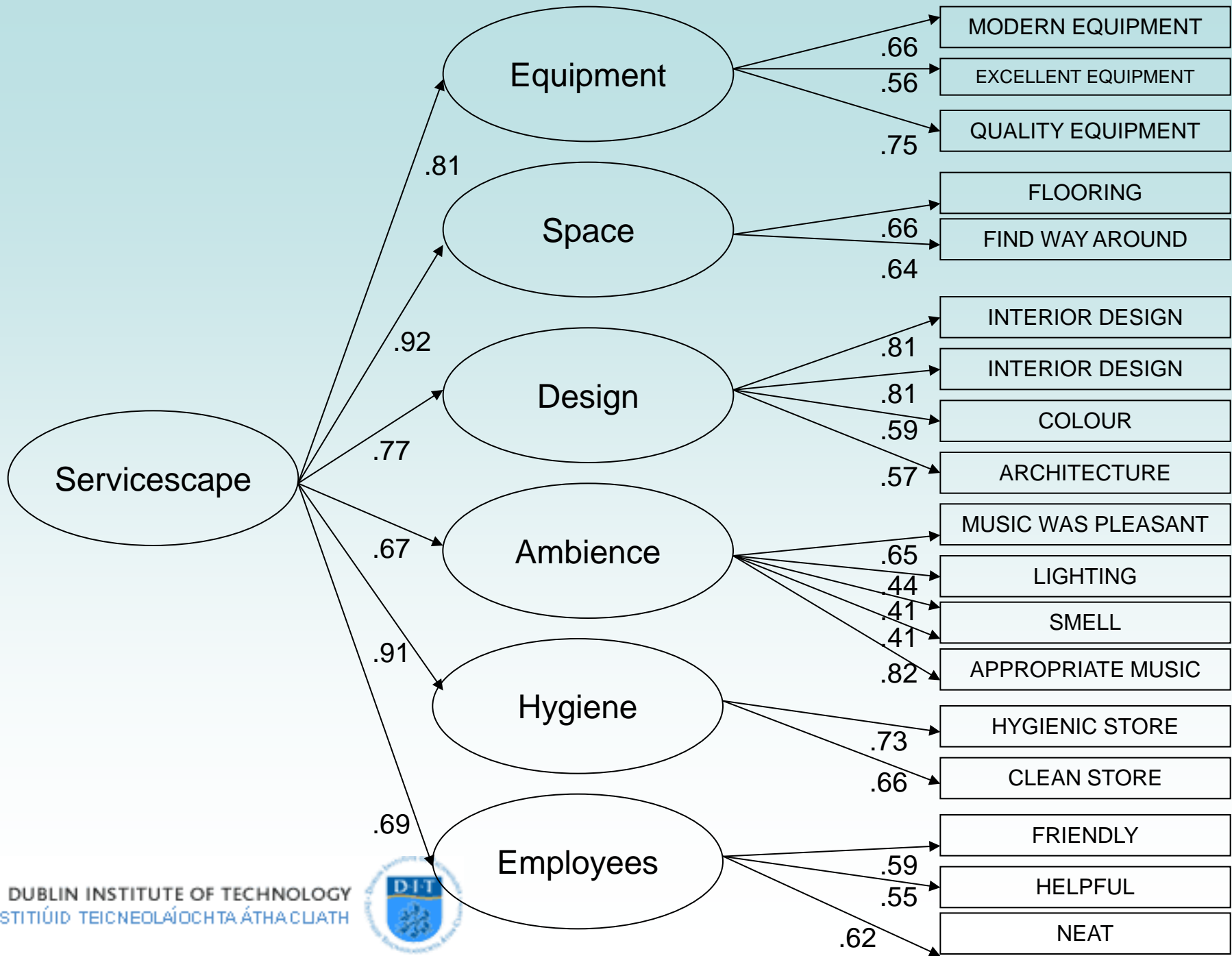
- Limitations to the Literature
  - Arbitrary choice of dimensions
    - Context specific
    - Questionable environmental stimuli
  - No cohesive servicescape structure proposed to date

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

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

$$X^2/df = 3.13$$
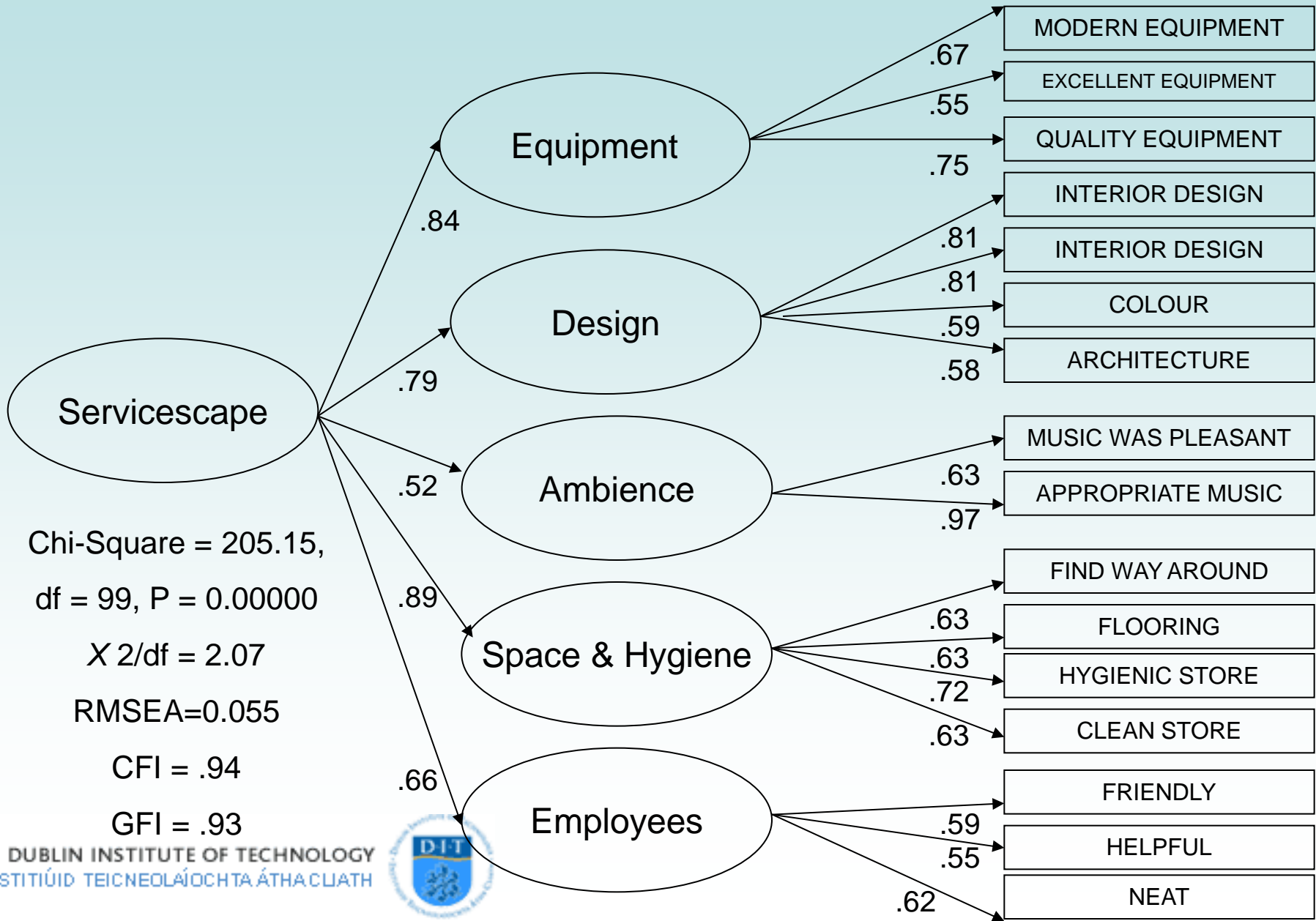
RMSEA: 0.078

CFI = 0.86

GFI = 0.89

* = $p < .01$

Respecified Second Order Factor Model

Chi-Square = 205.15, df = 99, P = 0.00000

X 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

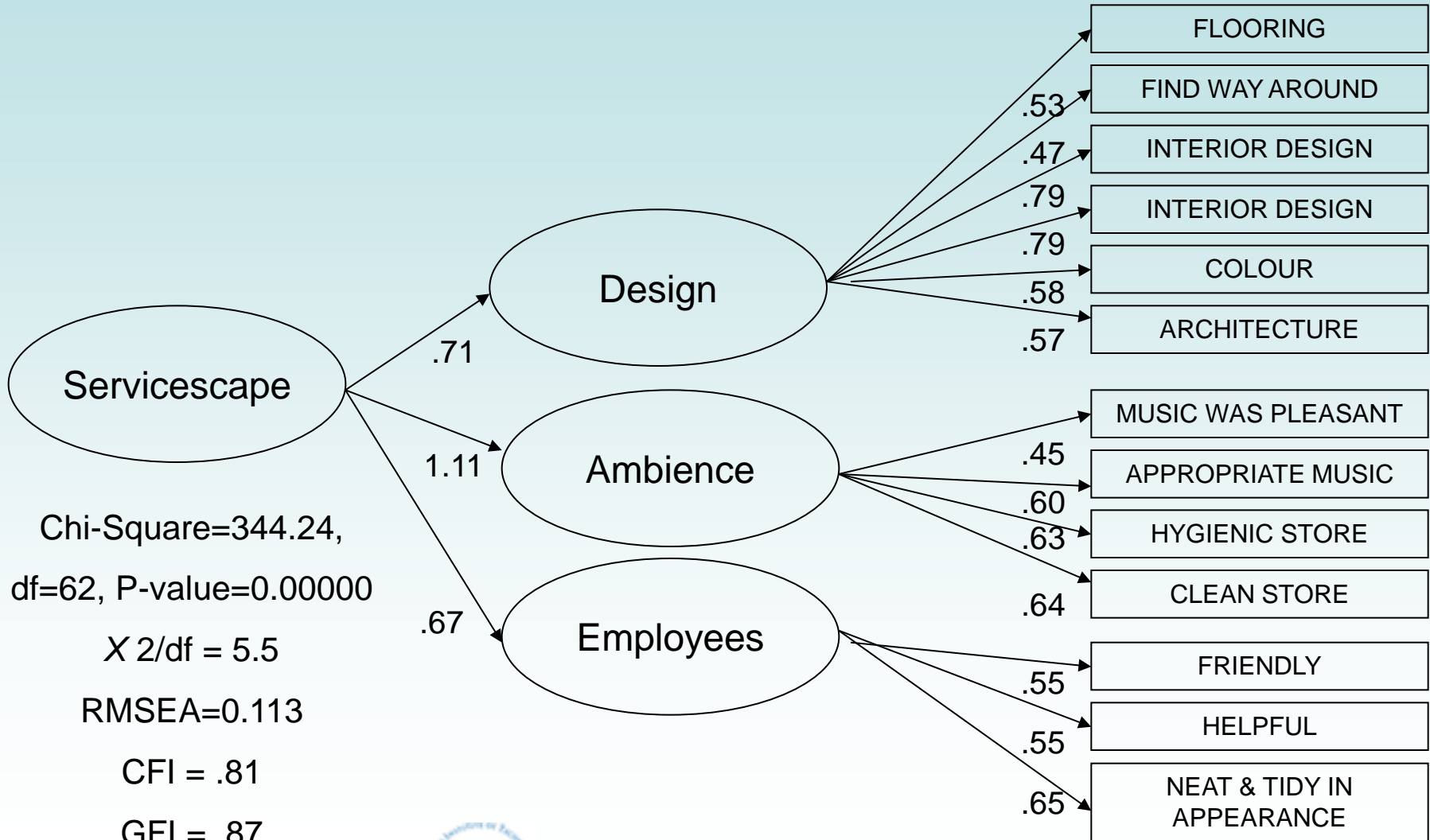# Alternative Conceptualisations of the Servicescape

Baker's model (1987)

Bitner's model (1992)

Ambient Conditions	**Design**	**Social Factors**	**Ambient Conditions**	**Space & Function**	**Signs, Symbols & Artifacts**
Temperature	Architecture	(Other Customers)	Temperature	Layout	Signage
Air Quality	Colour	Number	Air Quality	Equipment	Personal
Noise	Materials	Appearance	Noise	Furnishings	Activities
Scent	Shape Style	Behaviour	Odour		Style of Décor
Cleanliness	Layout	(Service Personnel)			
	Comfort	Number			
	Signage	Appearance			
		Behaviour			

Items used to test Baker's Model

Ambient Conditions
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
Design
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
Social Factors
The employees were neat and tidy in appearance
I found the staff friendly
The employees were helpful

Baker's Model

Servicescape

Design

.71

Ambience

1.11

.67

Employees

.53 → FLOORING
.47 → FIND WAY AROUND
.79 → INTERIOR DESIGN
.79 → INTERIOR DESIGN
.58 → COLOUR
.57 → ARCHITECTURE

.45 → MUSIC WAS PLEASANT
.60 → APPROPRIATE MUSIC
.63 → HYGIENIC STORE
.64 → CLEAN STORE

.55 → FRIENDLY
.55 → HELPFUL
.65 → NEAT & TIDY IN APPEARANCE

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

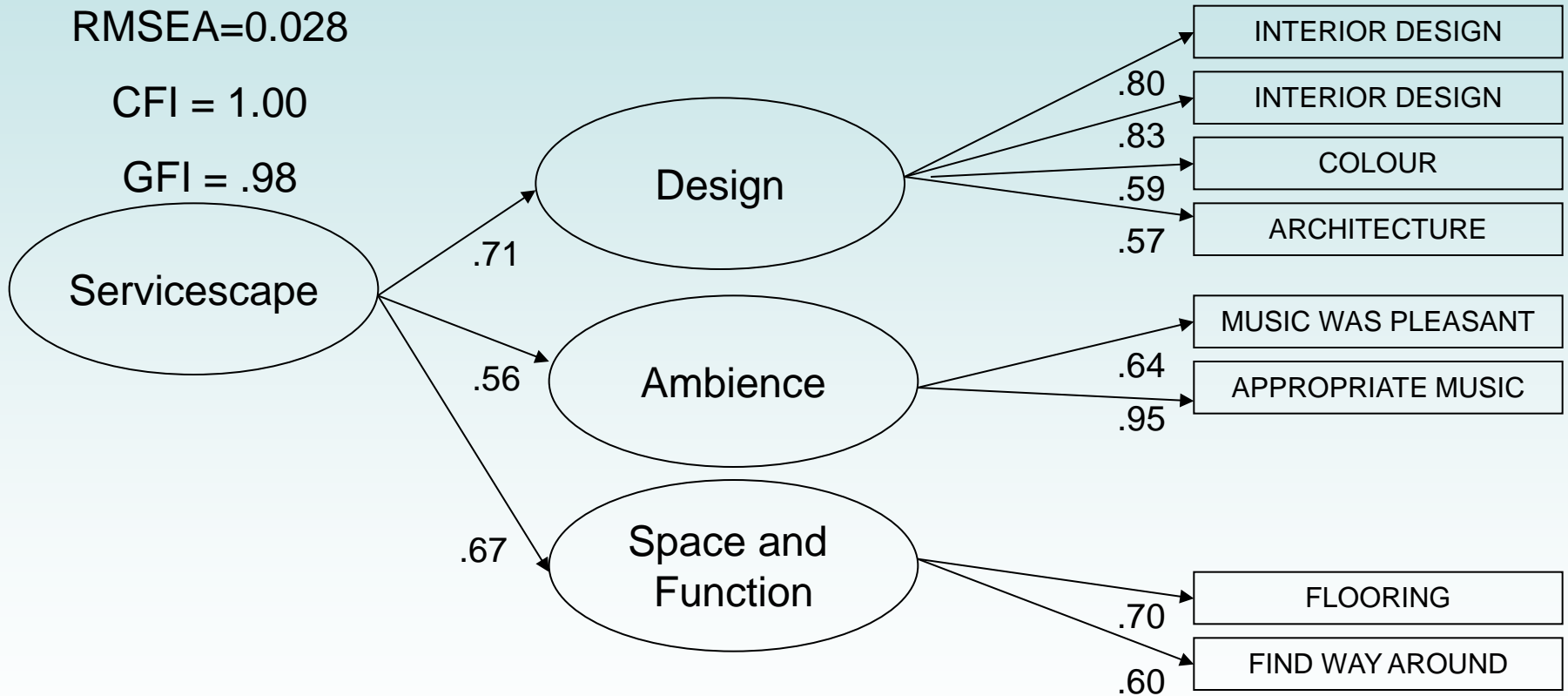| Ambient Conditions |
|---|
| The background music was pleasant |
| The lighting was comfortable |
| The atmosphere was comfortable |
| The store had a pleasant smell |
| The background music was appropriate |
| **Space and Function** |
| The flooring was appropriate |
| I found my way around quite easily |
| The interior layout was pleasing |
| **Signs, Symbols and Artefacts** |
| 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,

$X\,2/df = 1.28$

RMSEA=0.028

CFI = 1.00

GFI = .98

Servicescape

Design

.71

.80 INTERIOR DESIGN

.83 INTERIOR DESIGN

.59 COLOUR

.57 ARCHITECTURE

Ambience

.56

.64 MUSIC WAS PLEASANT

.95 APPROPRIATE MUSIC

Space and Function

.67

.70 FLOORING

.60 FIND WAY AROUND

Fit Statistic	Current Model	Baker Model	Bitner Model
χ^2, df, and p value	205.15, df = 99, p = 0.00	344.24, df = 62, p = 0.00	21.86, df = 17, p = 0.19
χ^2/df ratio	2.07	5.55	1.28
RMSEA	0.05	0.113	0.028
CFI	0.94	0.81	1.00
NFI	0.89	0.78	0.98
IFI	0.93	0.81	1.00
SRMR	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

Daire Hooper