

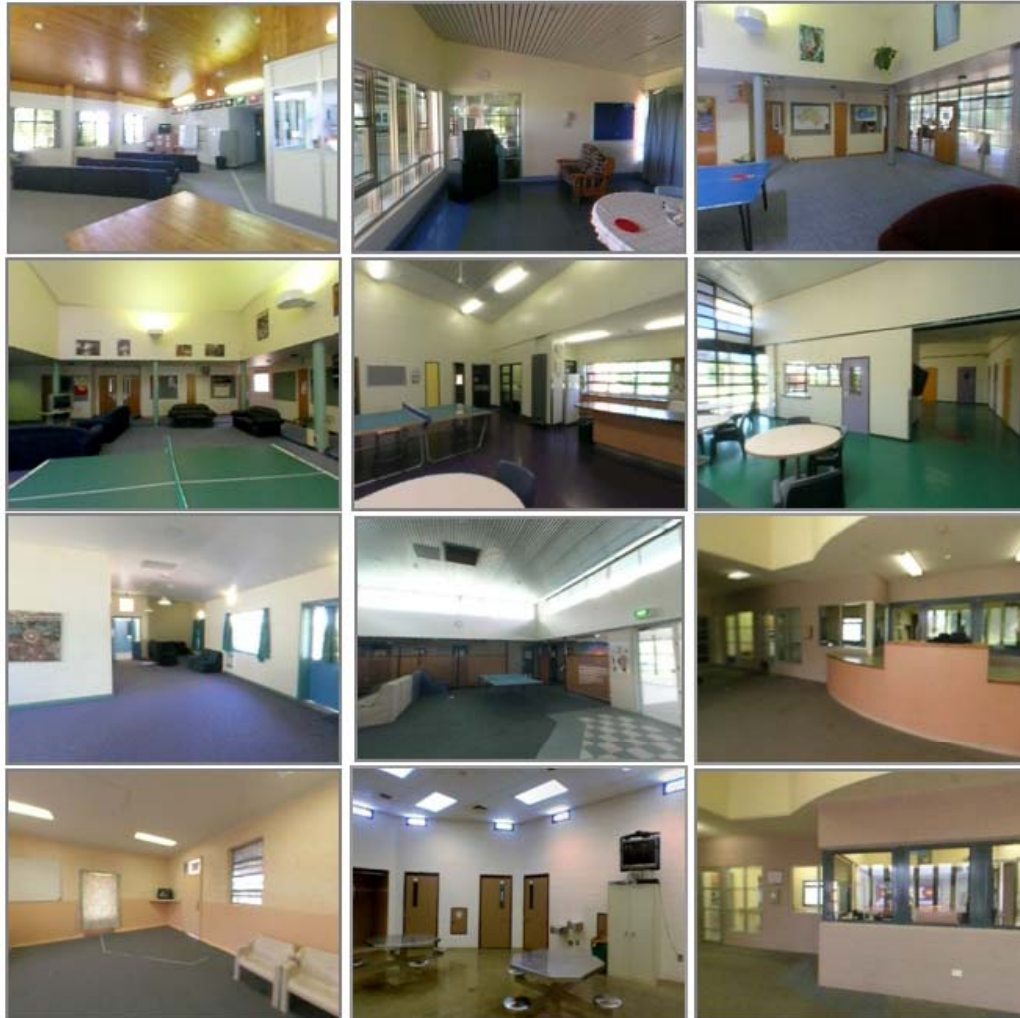


Does design make a difference?

Utilizing Affect Control Theory to understand the situational influence of physical design on staff-detainee interaction in juvenile detention centres

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Supervisors (Simon Hayman, Gary Moore, Terry Purcell and Richard Lamb)

Physical Design of JDC facilities

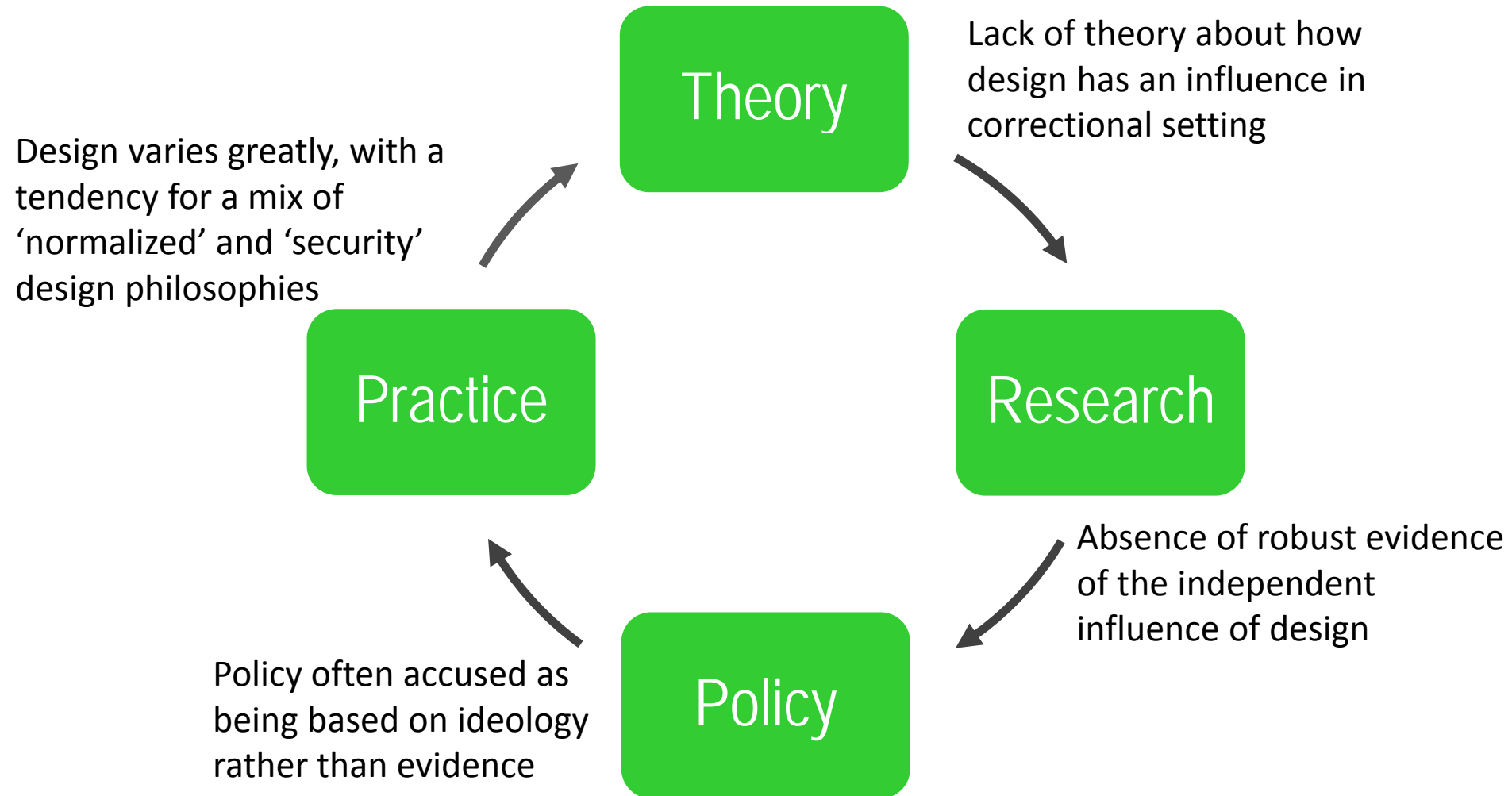


Common Design Attributes

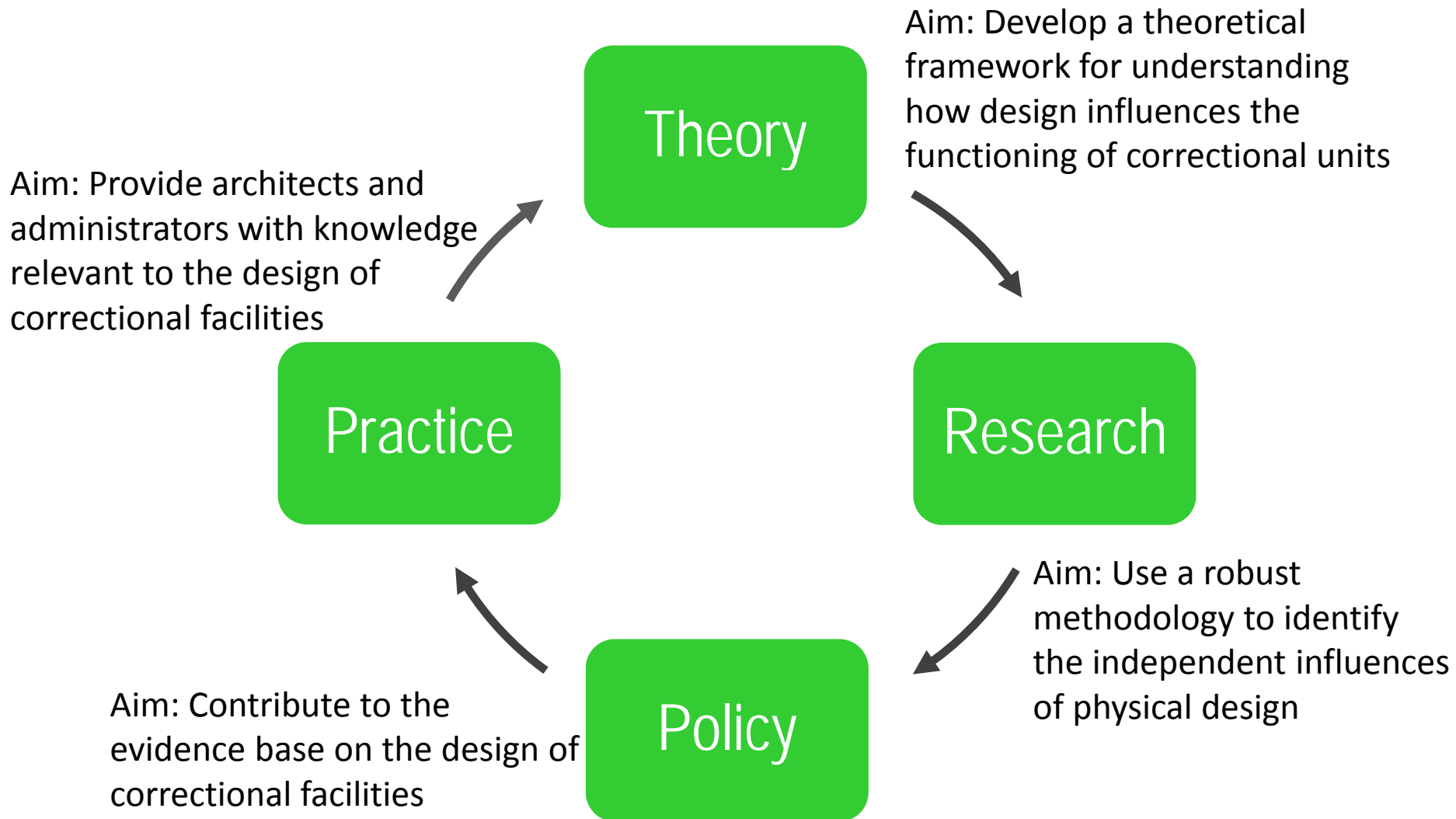
- Configuration, space and control room
- Safety and Security
- Normative value and scale
- Division of space
- Colour and finishes
- Furnishings
- Natural lighting

Ricci et al (1999)

Theory, Policy & Practice Context



Theory, Policy & Practice Aims



Overview of study

Theory

Affect Control Theory developed to investigate the influence of physical design on social interaction in JDCs

Administration Method

Administered a questionnaire to groups of detainee and staff participants in actual JDC facilities

Questionnaire

Assessed participants affective ratings, expectations and perceptions in a simulated JDC unit

Simulations

Participants responded to one of three simulated JDC units that varied in physical design

Affect Control Theory (Heise, 1999)

Affect Control Theory (ACT) provides a framework for understanding how people's **affective meanings** and **affective experience** of *objects* (i.e. people, behaviors and settings) guide social interaction and behaviour

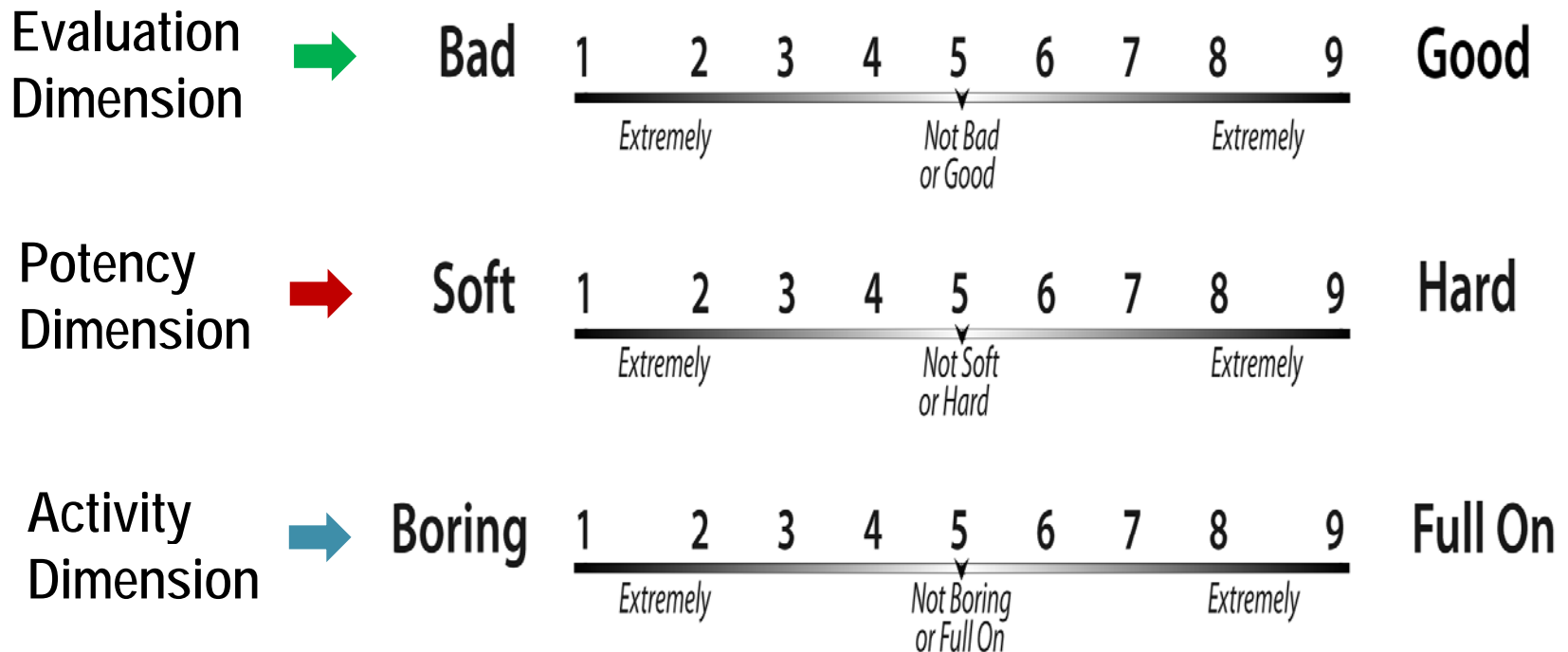
Three affective constructs are relevant in this research:

- **Fundamental sentiments** are the affective meanings we attribute to people, behaviours and settings (i.e. objects) based on past experience
- **Impressions** are our affective experience of *objects* within situations
- **Design context sentiments**, a concept developed in this research, are our sentiments for objects in the context of physically designed settings

*Alternatively, ACT proposes that we **behave** and expect others to behave so that our fundamental sentiments will be confirmed in situations*

Measuring Affective Sentiments

- Affective sentiments relate to how **good, powerful and active** a person, behaviour or setting is perceived to be
- As such, affect is conceptualized as having three dimensions and is assessed for fundamental, impressions and design context sentiments using three semantic differential scales



Sketching out the ACT framework

Fundamental sentiments for:

Staff members

Detainees

Residential Units

Themselves

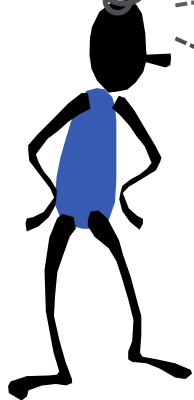
Impressions & expectations of events

Staff Member

Behaviour : yells at

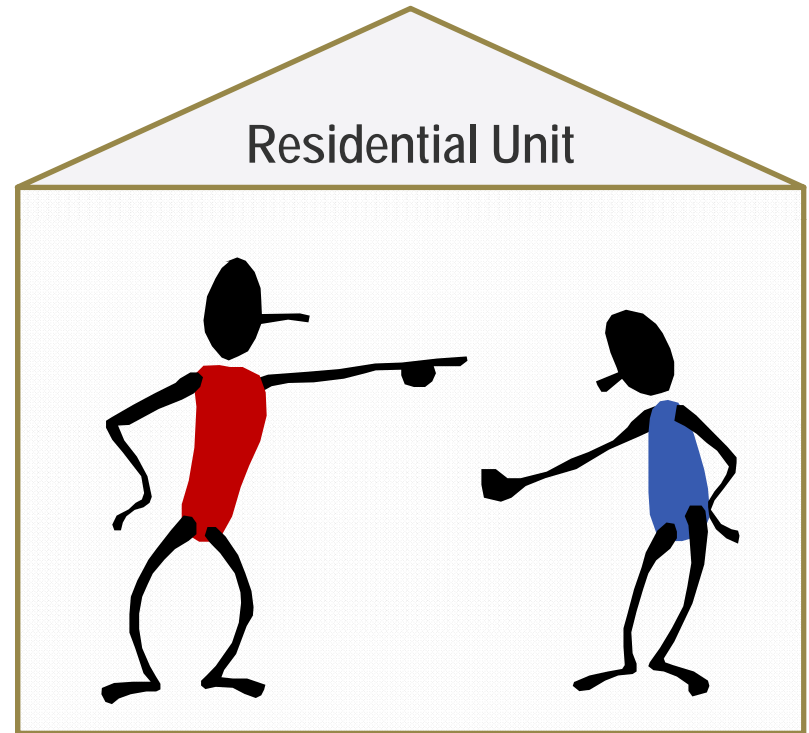
Detainee

Residential Unit



The detainee observer

A situation or event



A staff member yells at a detainee in a residential unit

Sketching Out Design Context Sentiments

Fundamental sentiments for:

Staff members

Detainees

Residential Units

Themselves

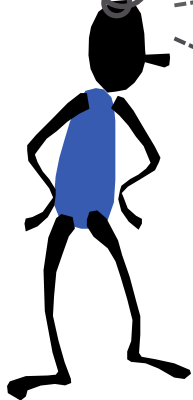
Design Context Sentiments for

Staff Member

Detainee

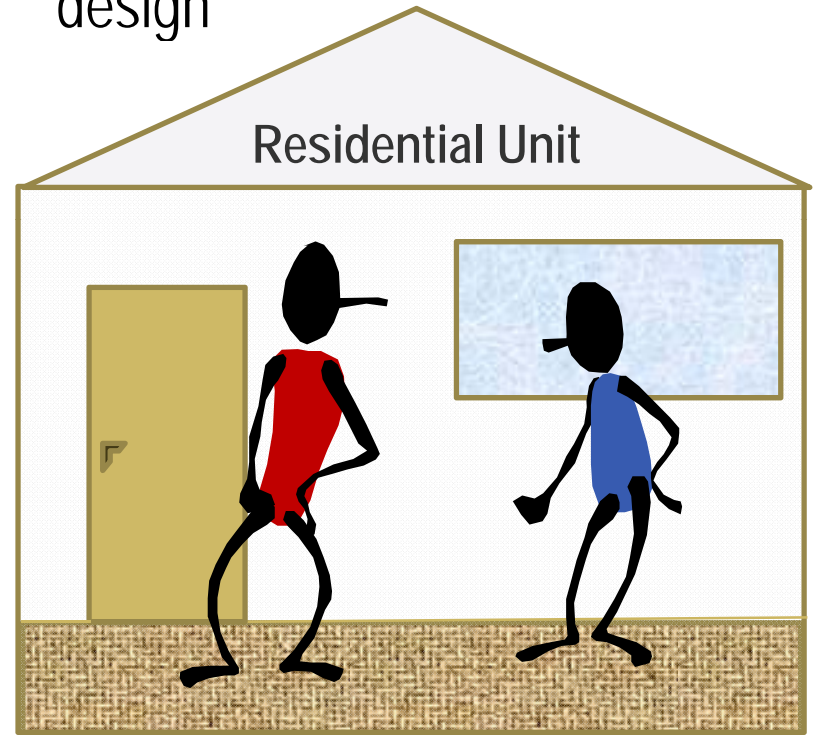
Residential Unit

Themselves



The detainee observer

Objects in the context of unit with a particular physical design



Staff members

Detainees

Residential unit

Sketching Out Design Context Sentiments

Fundamental sentiments for:

Staff members

Detainees

Residential Units

Themselves

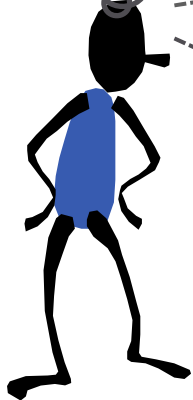
Design Context Sentiments for

Staff Member

Detainee

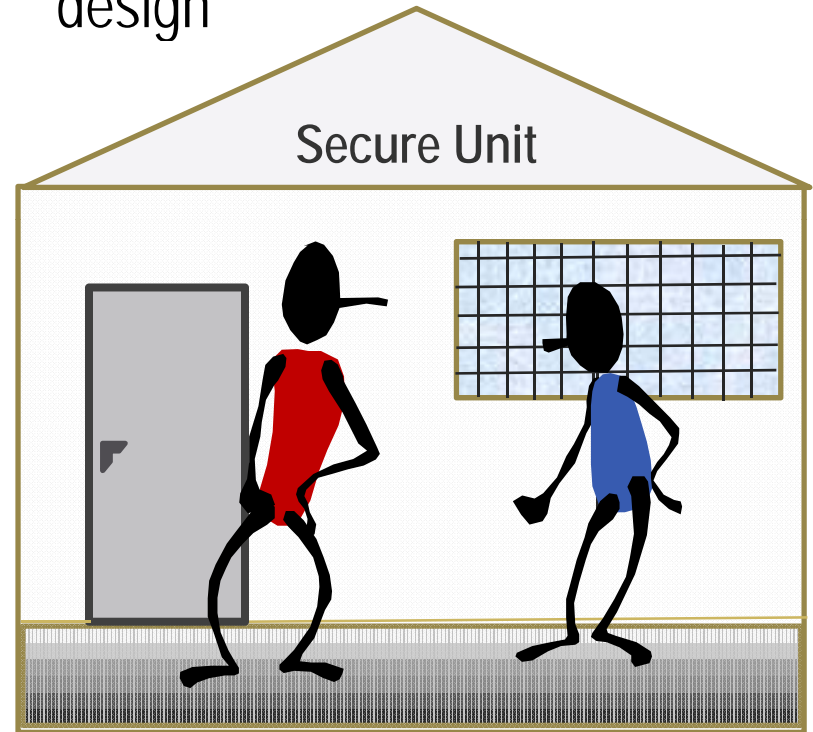
Residential Unit

Themselves



The detainee observer

Objects in the context of unit with a particular physical design



Staff members

Detainees

Residential unit

Sketching Out Behaviour Likelihood

Fundamental sentiments for:

Staff members

Detainees

Residential Units

Themselves

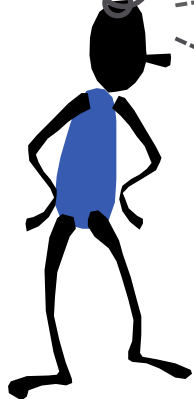
Design Context Sentiments for

Staff Member

Detainee

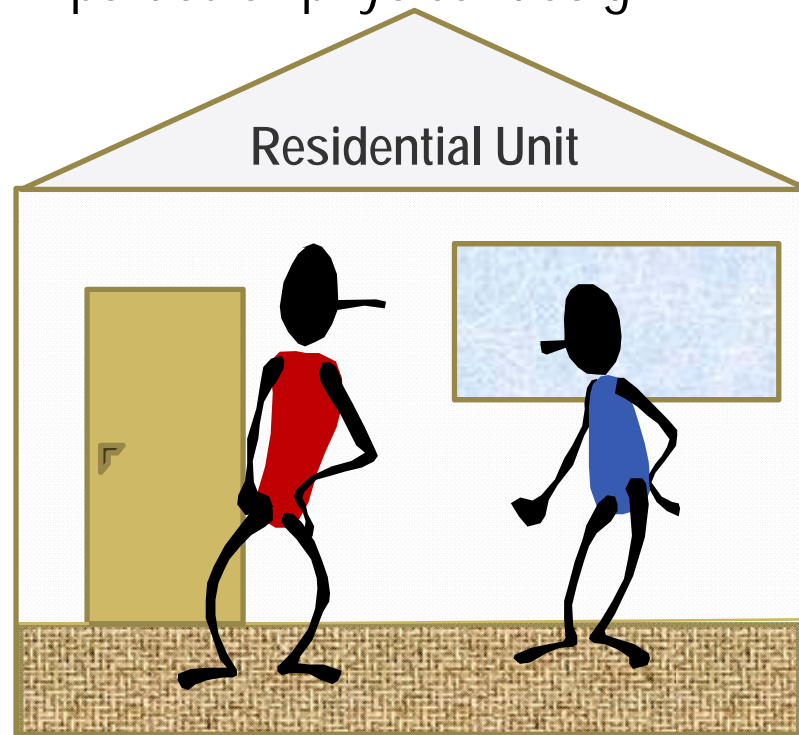
Residential Unit

Themselves



The detainee observer

Objects and events in the context of unit with a particular physical design



How likely is it that a staff member yells at a detainee in this unit?

Sketching Out Behaviour Likelihood

Fundamental sentiments for:

Staff members

Detainees

Residential Units

Themselves

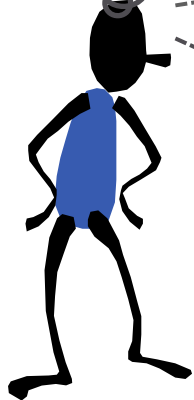
Design Context Sentiments for

Staff Member

Detainee

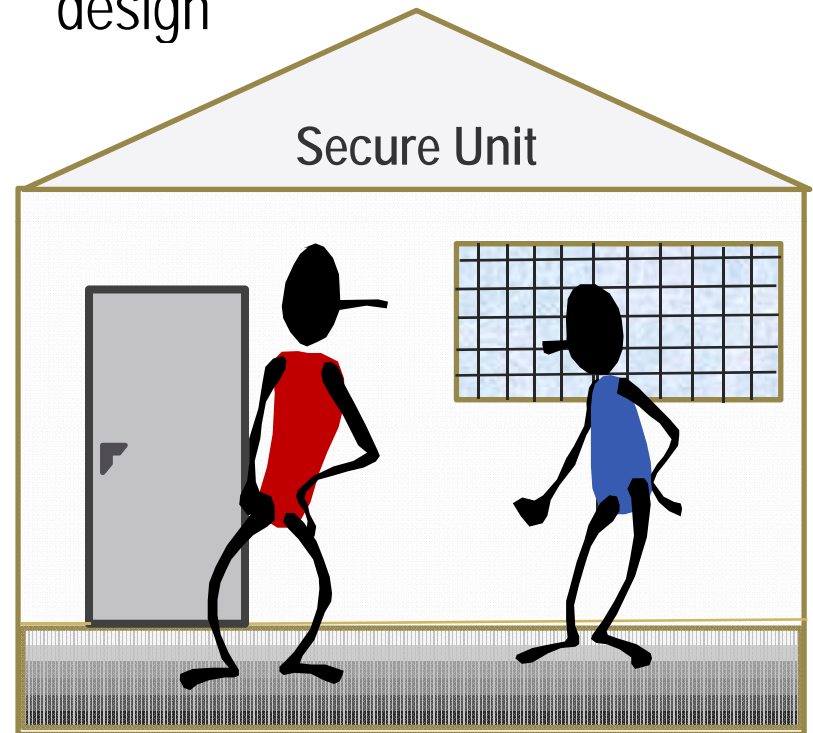
Residential Unit

Themselves



The detainee observer

Objects in the context of unit
with a particular physical
design



How likely is it that a staff member
yells at a detainee in this unit?

Research Question

Exploratory Questions

What are detainee participants fundamental sentiments for staff, detainees, residential units and themselves in JDC facilities?

Do detainee's design context sentiments for staff, detainees, the unit and themselves vary for units differing in design?

Do detainee's expectations for behaviours vary in units differing in design?

A Hypothesis

Affectively good JDC residential units will 'constrain deviance' (Smith-Lovin, 1987), with negative behaviour expected as less likely to occur

IIE Simulations of JDC Residential Units

Unit 1: Institutional and High Security JDC Residential Unit



Normalized - Very Low
Hard security - Very High

Lighting - Very Low
Visual security - Very High

Familiar - Very Low
Staff Control Room - Very High

Unit 2: Normalized and Secure JDC Residential Unit

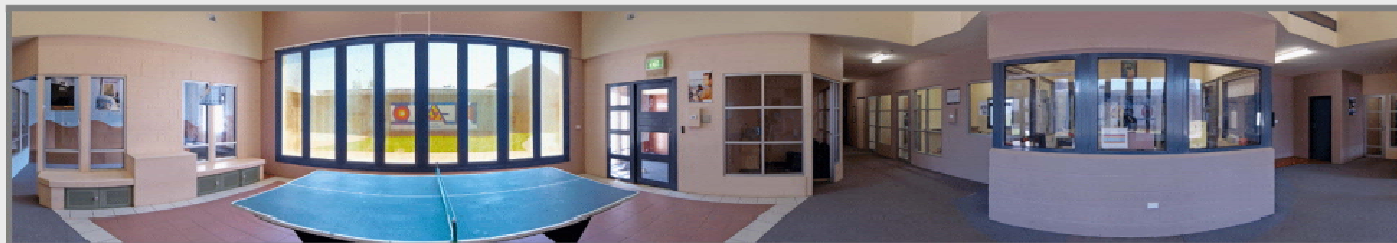


Normalized - High
Hard security - Moderate

Lighting - High
Visual security - Moderate

Familiar - Moderate
Staff Control Room - Very High

Unit 3: Part-Normalized and Secure JDC Residential Unit



Normalized - Moderate
Hard security - High

Lighting - Moderate
Visual security - Moderate

Familiar - Moderate
Staff Control Room - Very Low

Questionnaire

Fundamental sentiments

QUESTION 1.

What do you reckon most **staff** are like in juvenile justice centres?

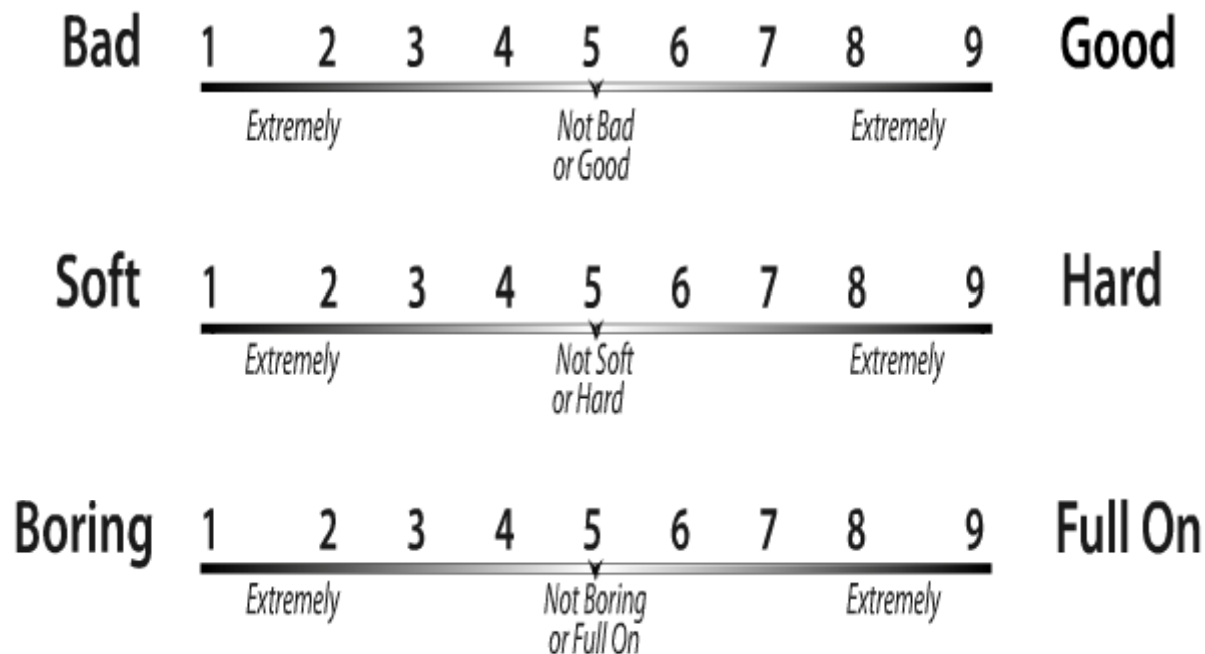
Staff are



QUESTION 2.

What do you reckon most **detainees** are like in juvenile justice centres?

Detainees are



QUESTION 3.

What do you reckon the **inside of most units** in juvenile justice centres are like?

Inside the units are



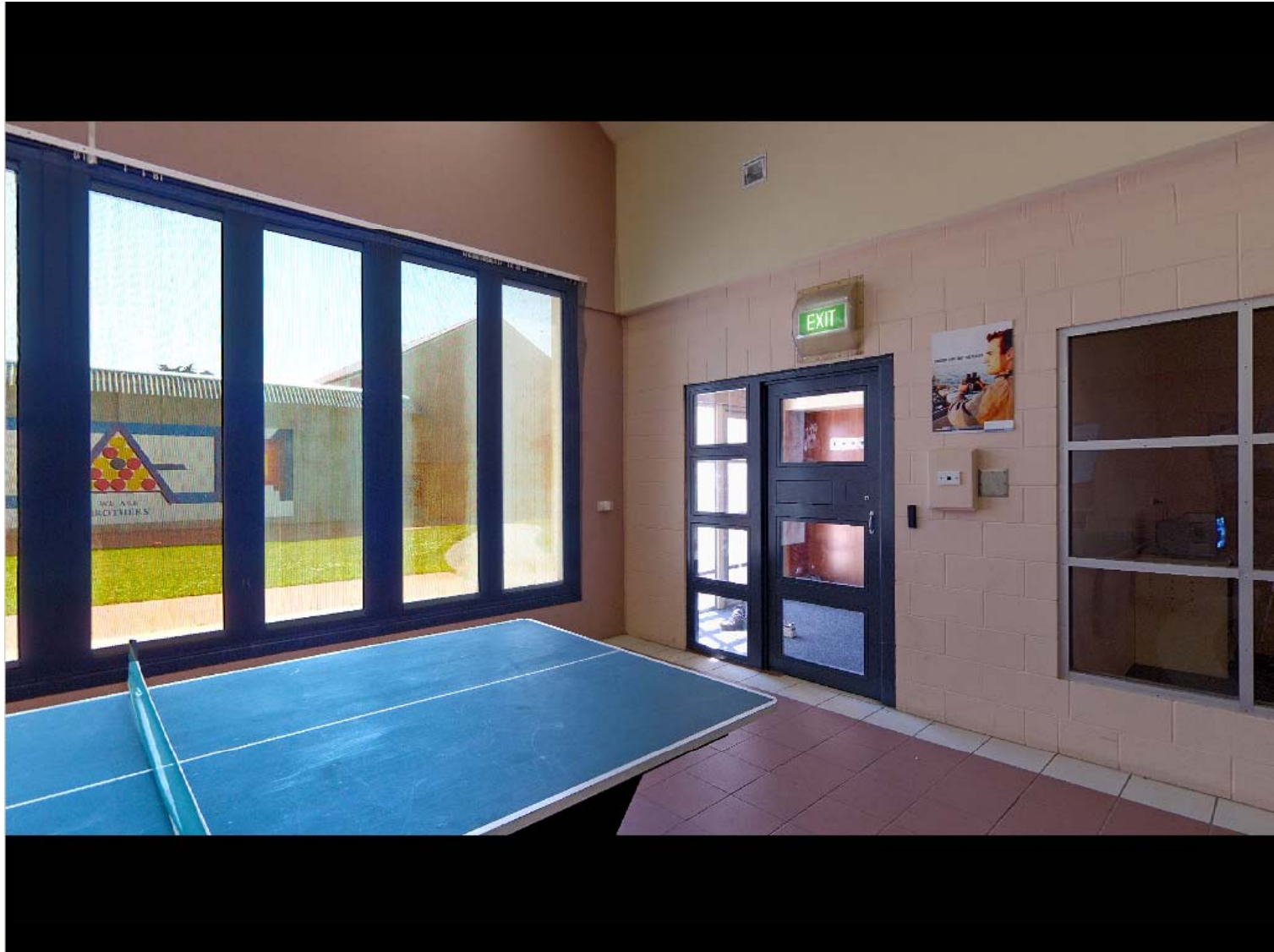
QUESTION 4.

What do you reckon **you** are usually like in juvenile justice centres?

You are







Questionnaire

Design context sentiments



QUESTION 5.

In this unit, what do you reckon **staff** are like?

Staff are

Bad	1	2	3	4	5	6	7	8	9	Good
	<i>Extremely</i>				<i>Not Bad or Good</i>			<i>Extremely</i>		
Soft	1	2	3	4	5	6	7	8	9	Hard
	<i>Extremely</i>				<i>Not Soft or Hard</i>			<i>Extremely</i>		
Boring	1	2	3	4	5	6	7	8	9	Full On
	<i>Extremely</i>				<i>Not Boring or Full On</i>			<i>Extremely</i>		

Questionnaire

Behaviour likelihood sentiments



QUESTION 12.

How likely is it that **a staff member ignores a detainee in this unit?**

This is

**Extremely
Likely**

1 2 3 4 5 6 7

**Not At All
Likely**

Research Design and Sample

TREATMENT CONDITIONS

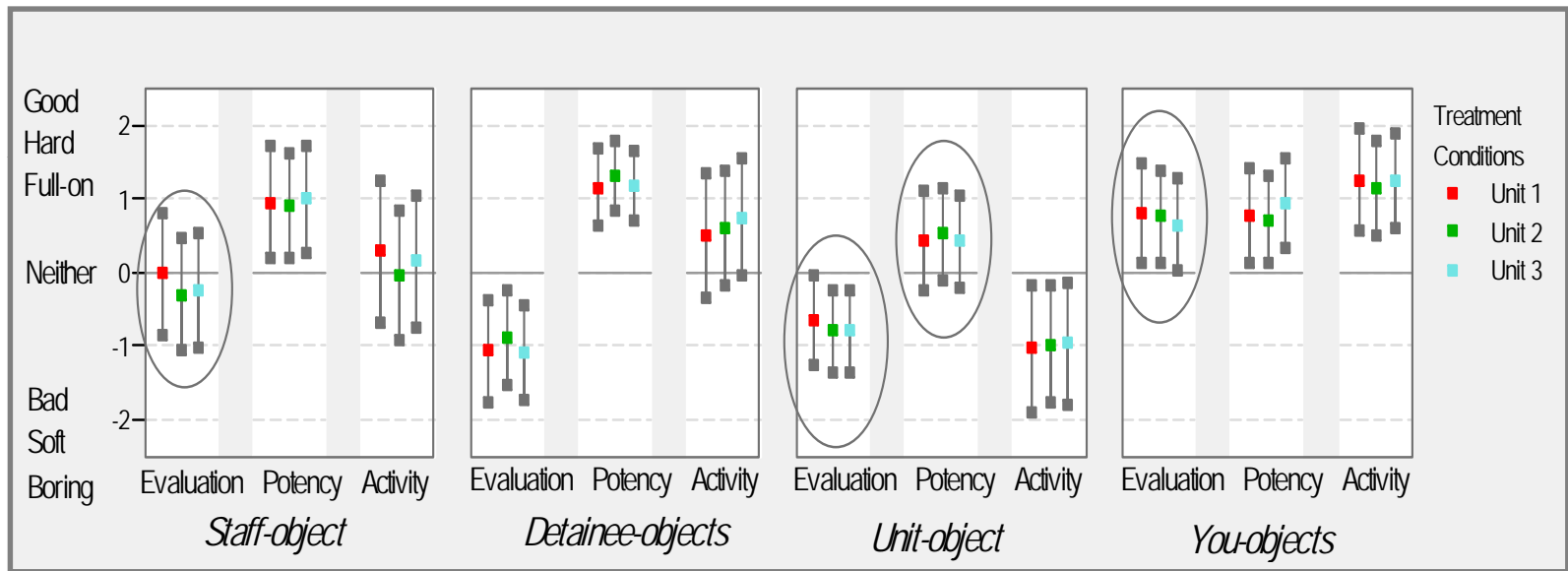
ROLE	Unit 1	Unit 2	Unit 3	Totals
Detainee	30 (4)*	31(9)	31(8)	92 (21)
Staff	20(3)	19(4)	17(4)	56(11)
Totals	50	50	48	148

* Included after propensity score method (excluded)

Reversing Experiments

The Propensity Score Approach

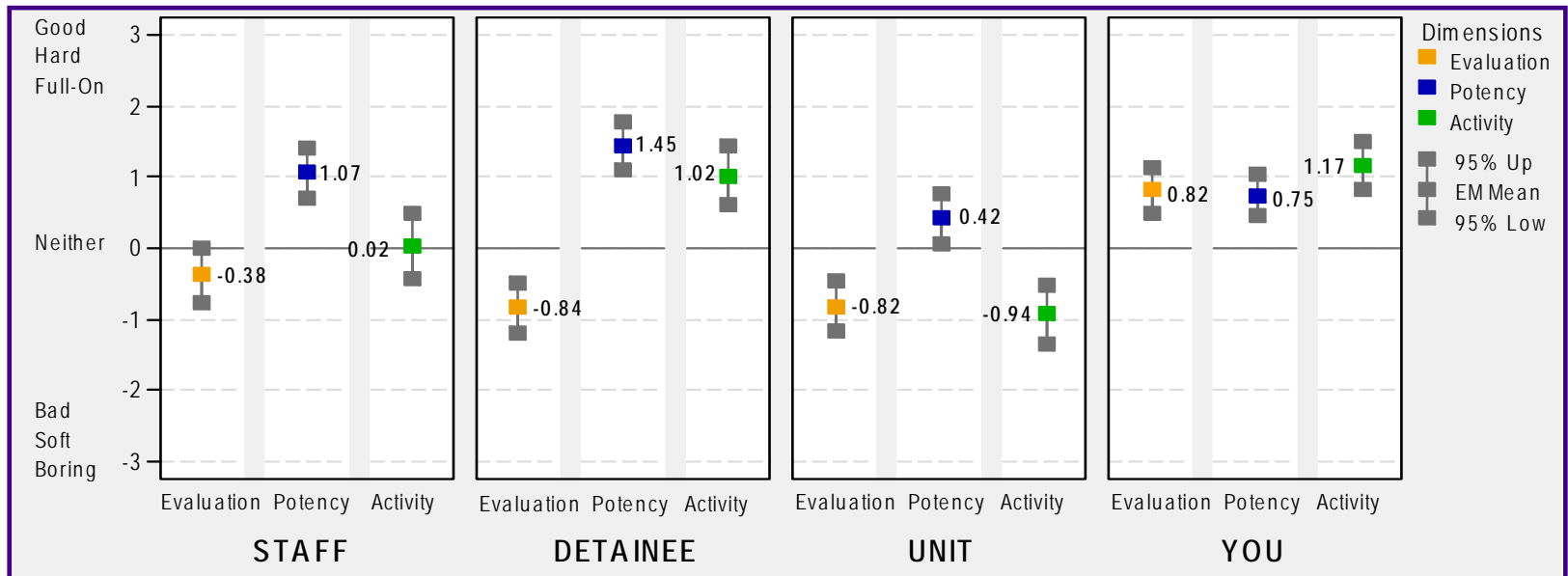
Adjusted differences on pre-test items between the treatment conditions:
means and 95% CIs



Results: Fundamental Sentiments

What are detainee participants' fundamental sentiments for different objects in JDC facilities?

Objects	Dimensions		
	Evaluation	Potency	Activity
Staff-Objects	Neither good or bad	hard	neither full-on or boring
Detainee-Objects	bad	hard	full-on
Unit-Objects	bad	neither hard or soft	boring
You-Objects	good	hard	full-on



Results: Design Context Sentiments

Objects	Dimensions	Comparisons		
		Unit 1 – Unit 2	Unit 1 – Unit 3	Unit 2 – Unit 3
Staff Objects	Evaluation	Worse	Worse	Better
	Potency	Harder	Harder	Softer
	Activity	More Boring	More Boring	Same
Detainee Objects	Evaluation	Worse	Worse	Better
	Potency	Harder	Harder	Same
	Activity	More boring	More boring	Same
Unit Object	Evaluation	Worse	Worse	Better
	Potency	Harder	Harder	Softer
	Activity	More boring	More boring	Same
You Object	Evaluation	Worse	Worse	Better
	Potency	Harder	Harder	Same
	Activity	More Boring	Same	More full-On

Same

Better - Harder - More full-on

Worse - Softer - More boring

Better - Harder - More full-on

Worse - Softer - More boring

= EM mean difference less than +/- 0.5 scale units

= EM mean difference of comparison is more than 0.5 scale units and $p > .05$

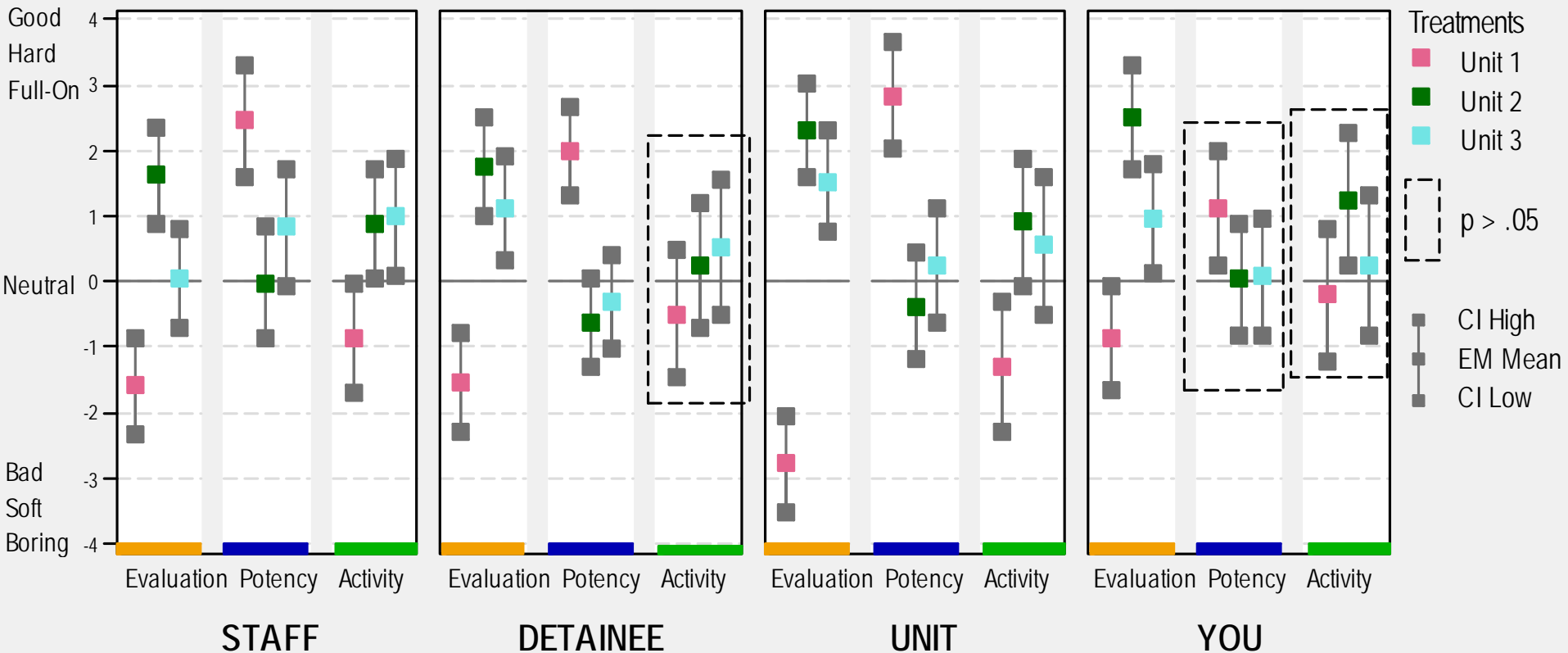
= EM mean difference of comparison is less than -0.5 scale units and $p > .05$

= EM mean difference of comparison is positive and significant at $p < .05$

= EM mean difference of comparison is negative and significant at $p < .05$



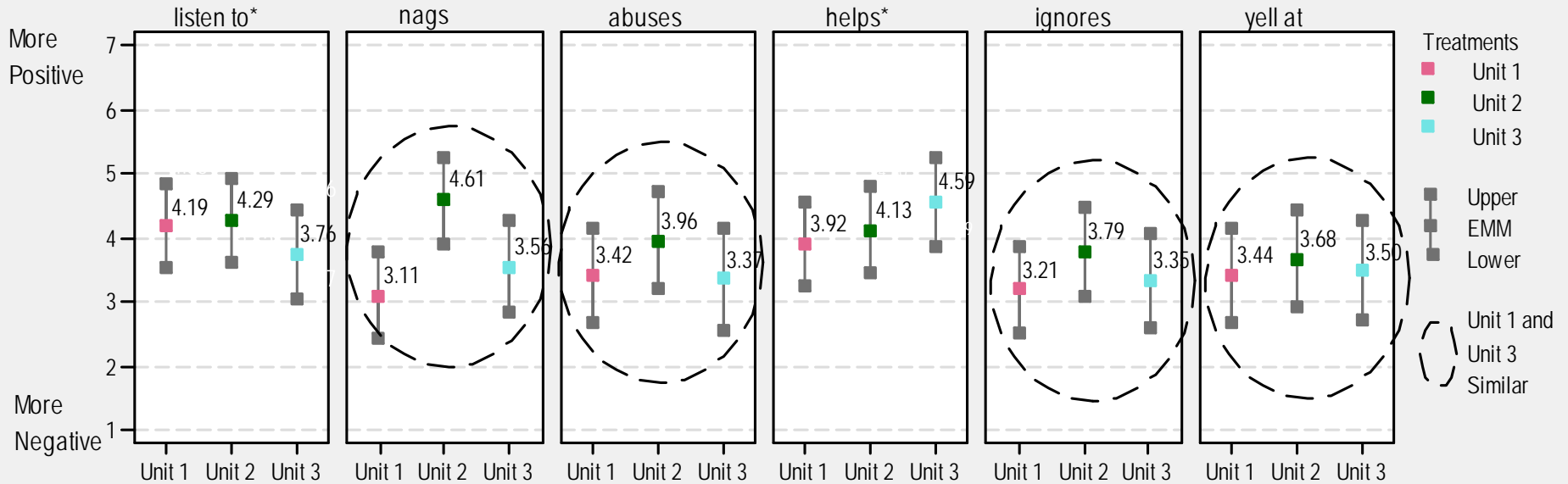
Results: Design Context Sentiments



Results: Behaviour Likelihoods

A detainee [insert behavior] a staff member in this unit.

A staff member [insert behavior] a detainee in this unit.



Multivariate test across the four negative behaviour items

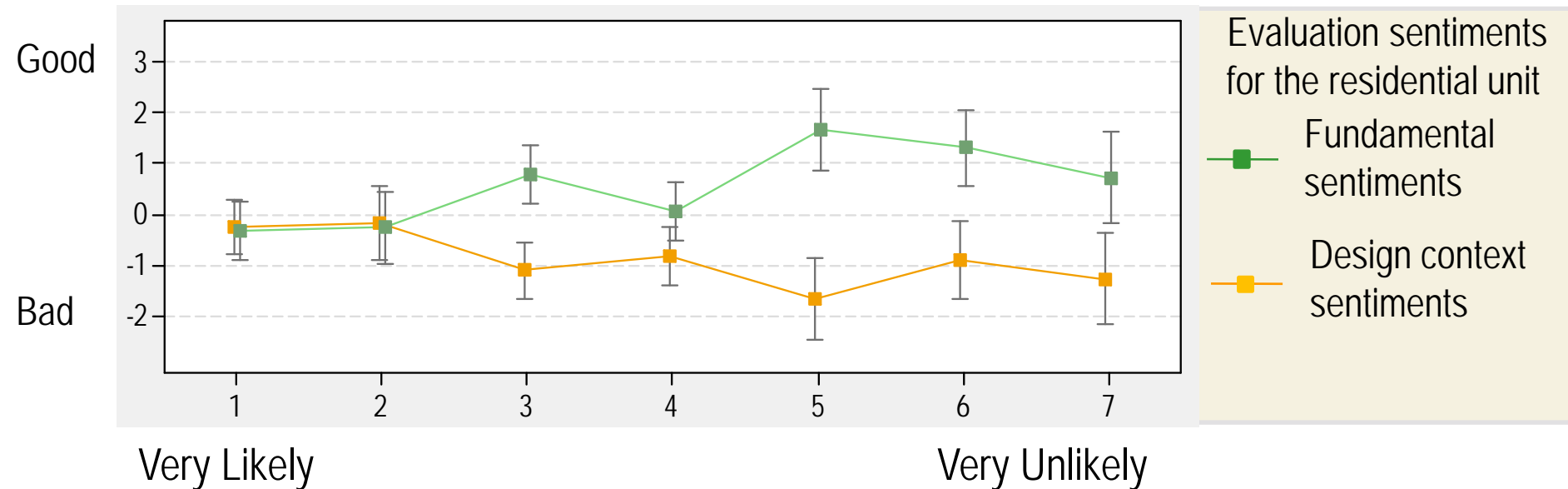
Pillai's Trace value = .115, $F(4, 78) = 2.534$, $p = .047$, partial $\eta^2 = .115$



Exploring Affective Control

Affect Control Theory predicts that when a behaviour would result in people's experience confirming their fundamental sentiments, a behaviour is more likely to occur

Event: a detainee abuses a staff member in this unit



Discussion and Conclusions

Fundamental Sentiments

- Detainee's fundamental sentiments indicated detainee viewed all objects as bad and hard, except themselves

Influence of design on sentiments

- Design context sentiments varied most substantially on the evaluation and potency dimensions between the high security, institutional unit and the other two units
- Detainees' evaluative sentiments for staff and themselves also varied between normalized, secure and part-normalized, secure units

Influence of Design on Expectations

- A consistent normalized design approach has a positive, yet modest, influence on expectations, with other design approaches resulting in relatively similar expectations
- Positive, affectively 'good' design did appear to constrain detainee participants' expectations of negative behaviour

Does design make a difference?

Contribution to answering this question:

- a strong quasi-experiment design was used to establish the independent effects of design on staff and detainees' perceptions and expectations
- the mechanisms by which design may make a difference in correctional facilities was closely investigated utilizing a theoretical framework of social interaction
- the results indicated that to influence detainee expectations of negative behaviour, a design needs to be consistently normalized

Thank you!

Contact Info:

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Questionnaire



QUESTION 5.

In this unit, what do you reckon **detainees** are like?

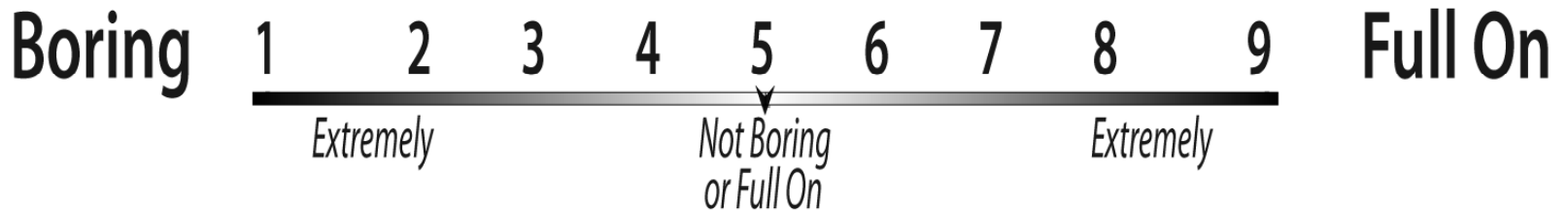
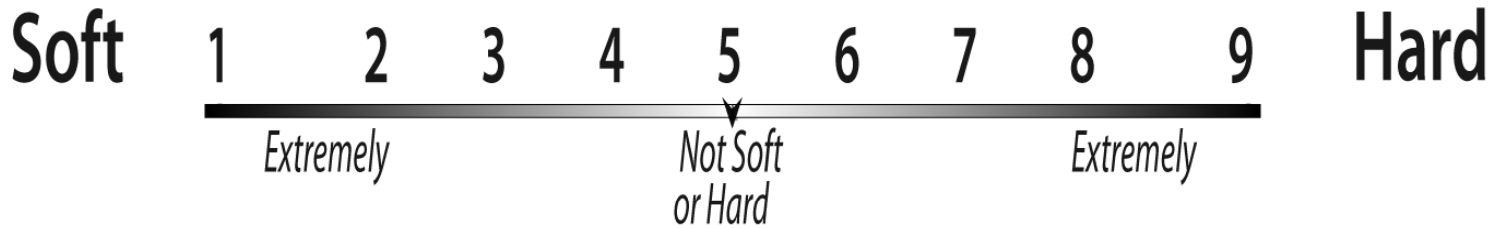
Detainees are

Bad	1	2	3	4	5	6	7	8	9	Good
	<i>Extremely</i>				<i>Not Bad or Good</i>		<i>Extremely</i>			
Soft	1	2	3	4	5	6	7	8	9	Hard
	<i>Extremely</i>				<i>Not Soft or Hard</i>		<i>Extremely</i>			
Boring	1	2	3	4	5	6	7	8	9	Full On
	<i>Extremely</i>				<i>Not Boring or Full On</i>		<i>Extremely</i>			

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EPA Measurement



ACT Conceptual Architecture (Lulham, 2006)



ACT Conceptual Architecture (Lulham, 2006) applied to staff-detainee interaction in JDC facilities

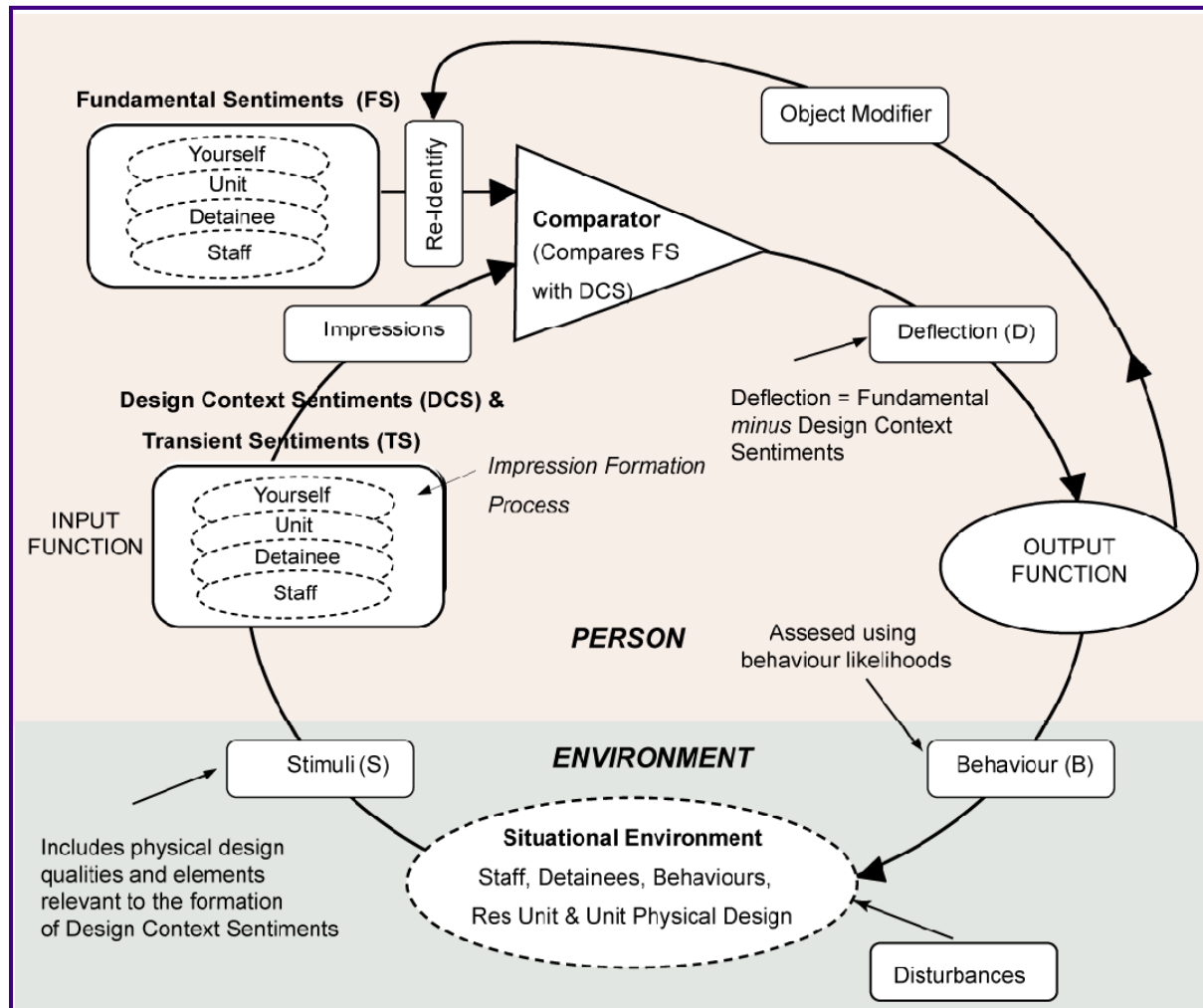


Figure: Example of completed design attributes task sheet



Things You May Have Noticed

Either circle two of the things in list below or name something else that you noticed about the unit.

- A. the layout of the unit
- B. locks, bars and security fixtures
- C. decorations, pictures, etc
- D. walls, carpets, ceilings etc
- E. the staff area/office
- F. size of the unit
- G. furniture
- H. windows, amount of light
- I. other phone
- J. other

There are no right or wrong answers, just identify two things you notice.

Thing You Noticed					Thing You Noticed					
1. <u>A</u> _____ (Draw Arrow)					2. <u>J</u> _____ (Draw Arrow)					
Bad	1	2	3	4	5	6	7	8	9	Good
	<i>Extremely</i>			<i>Not Bad or Good</i>			<i>Extremely</i>			
Bad	1	2	3	4	5	6	7	8	9	Good
	<i>Extremely</i>			<i>Not Bad or Good</i>			<i>Extremely</i>			



Linking practice, research and theory

Practice (Roush et al, 1996)

- What factors are critical to the effective functioning of residential units in correctional facilities?

Research (Wener

- Does physical design influence the functioning of residential units in correctional facilities?

Theory

- How does physical design influence the functioning of residential units in correctional facilities?