

Her ... 18.1, ...

1. The ... C ... A D 49, ...
2. The ...
3. The ... E ... Fr ... 100, B), ... A ... 18.2.1 ...

18.2.3 Experience-Based Choice

The ...

Experience-based choice

Fr ... 18.1, ...

3. ... (..., ..., ..., 40, ..., 444).
4. *advice taking* ... (..., ..., ..., 7, ..., ..., 8, 42), ... (C..., 20). I f ... combination f() ... (r) ... (18.2.7) ... (18.4.2).

18.2.5 Policy-Based Choice

... I ... *policy* ... (..., ..., ..., ...). L ... (..., ..., 59, C..., 2). ... *choice bracketing* 75 ... *self-control* 73 .

1. A r ... C r r ...

⁷ ...

2. ...
A ...
F r ...

18.2.7 Combinations of Choice Patterns

The ... 9, 10. E ... 39, ... 3.3.7 ...
A ...
(...) ...
18.3.2

18.2.8 What Constitutes a Good Choice?

If ... A ... (... 4, 32, 96). A ...
39, ... 3.6):

1. C ...
T ...
T ...

2. Consider the ...
 3. Consider the ...
 4. Consider the ...
- A ... (18.4.2.)

Let ... (96).

18.3 Choice Support Strategies and Recommendation

... A ...

... B ...

... ACADE ... (39, ... 4), ...

... F. 18.1 ...

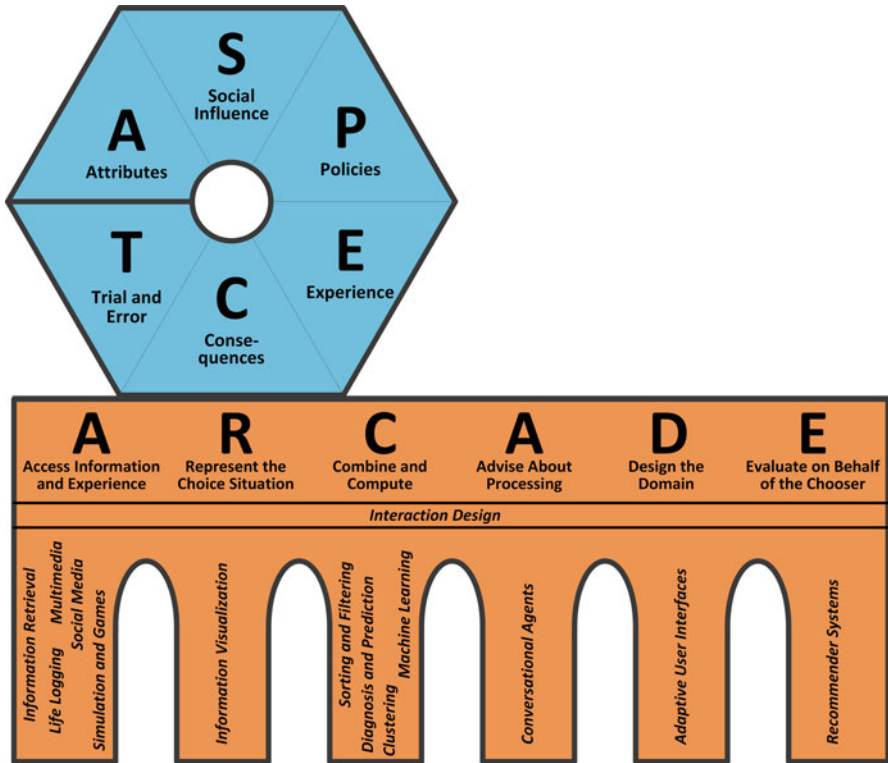


Fig. 18.1 HCI Design: Principles, Practices, and Research. A CADE (Choice Architecture Design Environment) (T. Kuhlmann, 2013, <http://www.usability.gov/choice-architecture.html>)

18.3.1 Evaluate on Behalf of the Chooser

The *Evaluate on Behalf of the Chooser* component of a CADE (Choice Architecture Design Environment) is designed to help users make better choices. As shown in Fig. 18.1, this component involves several key activities: Access Information and Experience, Represent the Choice Situation, Combine and Compute, Advise About Processing, Design the Domain, and Evaluate on Behalf of the Chooser. These activities are supported by various interaction design techniques, including Information Retrieval, Life Logging, Multimedia, Social Media, Simulation and Games, Information Visualization, Sorting and Filtering, Diagnosis and Prediction, Clustering, Machine Learning, Conversational Agents, Adaptive User Interfaces, and Recommender Systems.

18.3.2 Advise About Processing

The *Advise About Processing* component of a CADE (Choice Architecture Design Environment) is designed to help users make better choices. This component involves several key activities: Access Information and Experience, Represent the Choice Situation, Combine and Compute, Advise About Processing, Design the Domain, and Evaluate on Behalf of the Chooser. These activities are supported by various interaction design techniques, including Information Retrieval, Life Logging, Multimedia, Social Media, Simulation and Games, Information Visualization, Sorting and Filtering, Diagnosis and Prediction, Clustering, Machine Learning, Conversational Agents, Adaptive User Interfaces, and Recommender Systems.

... 18.8.

18.3.5 Combine and Compute

... A ...

18.3.6 Design the Domain

... *Represent the Choice Situation* ...

... *Represent the Choice Situation*, ... *Design the Domain*, ...

... 1980. (C. 10).

18.3.7 Concluding Remark on Support Strategies

... Evaluate on Behalf of the Chooser.

18.4 Arguments and Explanations

... argument. An ... explanation ... (18.4.2).

18.4.1 Arguments

... (89), ...

... Access Information and Experience ... Combine and Compute ... Represent the Choice Situation ... Advise About Processing ... Evaluate on Behalf of the Chooser

...

1. E ... prove ...

2. The ...

18.4.2 Explanations of Recommendations

A ...

A ... explanations ...

18.4.2.1 Type 1: Direct Support for the Assessment of the Credibility of the Recommender System

Fr ... 34 ...

... realistic ...

⁹A ... C. 20.

18.4.2.2 Type 2: An Argument Coupled with a Fidelity Claim

1. A ... (...) ...

E ...

2. A fidelity claim ...

E ...

T ...

A ...

B ...

I ...

H ...

A ...

() ...

I ...

(... 10.3 of C ... 10), ...

Fr ...

18.4.2.3 Type 3: An Explicit Description of the Recommender System's Processing

IELE ... 1000 ... 50

33

34

... makes choices ...

... has preferences ...







18.5 “Preferences” and Ratings

... makes choices ...

18.5.1 What Are “Preferences”?

... preferences ...

Table 18.2 ... preferences

	Relative Preferences	Absolute Preferences
Specific Preferences	<p>1 In this situation, which of these dictionaries do you prefer?</p>   <p><input type="radio"/> <input type="radio"/></p>	<p>2 Indicate your degree of preference for the following dictionary in the current situation:</p>  <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>
General Preferences	<p>3 In general, which of these publishers do you prefer for bilingual dictionaries?</p>   <p><input type="radio"/> <input type="radio"/></p>	<p>4 Indicate your degree of general preference for the following brand of bilingual dictionary:</p>  <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>

12 ...

2 ...

1 ... (18.3.3). Fr ...

2 ...

ratings, ... (18.5.2).

A ... 18.2, ... preferences ...

¹⁰I ... (54).

... *general preferences*, ...

... **THEOREM 18.1** ...

... **THEOREM 18.2**, ... (, , , 26).

... *evaluation criteria*, ... *preferences* ... (, , , 18.7 ...)

... *preference model*, ...

(J, \dots ...).¹¹ I ...
 ... *perspectives* ...
 ... A ... (...
 H ...) ...

2. ...

... (J, H ...)
 ... R ... (J, H ...)

... 77 ...
 ... 1, 19, 65.

...
 ...

... F ... B ... 6 ...

3. A ... *relevant* ...

1. I ...

2. Tr ...

¹¹ ... 2, 77 ... 35 ...

18.6 Combating Choice Overload

A ... 18.2.1, ... choice overload. I ...

I ... (... 15, 78), ... 15

Choice overload ... choice overload ... 12.

A CADE ... Evaluate on Behalf of the Chooser ... 7 ... 5 ... 20

If ... 50 ... 78), ... 22 ... 63 ... maximize ... satisfy ... 80). I ... A CADE ...

¹² ... 38.

represent the choice situation, \mathcal{C} (94, C.26). For example, $\mathcal{C} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$. For more information, see 79, 231, and 13. *Advise About Processing*, \mathcal{P} (13).

If \mathcal{C} is a set of actions, \mathcal{P} is a set of processing steps, and \mathcal{G} is a goal, then the choice situation \mathcal{C} is a set of actions that can be performed to reach the goal \mathcal{G} . For example, $\mathcal{C} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, $\mathcal{P} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, and $\mathcal{G} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$. For more information, see 13.

18.7 Supporting Trial and Error

If \mathcal{C} is a set of actions, \mathcal{P} is a set of processing steps, and \mathcal{G} is a goal, then the choice situation \mathcal{C} is a set of actions that can be performed to reach the goal \mathcal{G} . For example, $\mathcal{C} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$. For more information, see 18.2.6. *Evaluate the Choice Situation*, \mathcal{E} (18.2.6).

If \mathcal{C} is a set of actions, \mathcal{P} is a set of processing steps, and \mathcal{G} is a goal, then the choice situation \mathcal{C} is a set of actions that can be performed to reach the goal \mathcal{G} . For example, $\mathcal{C} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, $\mathcal{P} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, and $\mathcal{G} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$. For more information, see 13.

If \mathcal{C} is a set of actions, \mathcal{P} is a set of processing steps, and \mathcal{G} is a goal, then the choice situation \mathcal{C} is a set of actions that can be performed to reach the goal \mathcal{G} . For example, $\mathcal{C} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, $\mathcal{P} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, and $\mathcal{G} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$. For more information, see 26.

A choice situation \mathcal{C} is a set of actions that can be performed to reach the goal \mathcal{G} . For example, $\mathcal{C} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, $\mathcal{P} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$, and $\mathcal{G} = \{(\text{Go}, \text{Left}), (\text{Go}, \text{Right}), (\text{Stop}, \text{Left}), (\text{Stop}, \text{Right})\}$.

Trial and Error, \mathcal{T} (13).

1. *Stable and Evolving*, \mathcal{S} (18.5.1)

Stable evaluation criteria: \mathcal{S} (18.5.1)

¹³For more information, see 64, 80.

- 1. *Evolving evaluation criteria:* $\mathbb{T}_t \dots$
- 2. *No improvement of preference model:* $\mathbb{T}_t \dots$ not
- 3. *Improvement of preference model:* $\mathbb{T}_t \dots$

18.7.1 Trial and Error with Stable Evaluation Criteria

... stable, \dots

... A ... 18.2.6, ...

... 18.2.8, ...

... (21, 71) ...

... C ... 61 ...

... F ... 56): $\mathbb{T}_t \dots$

... (76, 5). ... 57. ... Represent the Choice Situation ...

18.8.1 Context Effects

A ... context effects, ... decoy effect (asymmetric dominance; ... 37). ... 18.4, ... If ... A < B ... A ... B ... B ... D ... dominated. A: I ... B ... D ... B. H ... A < B ... A: I ... A ... B ... I ... A ... D ... (37) ... A ... D ...

... For ...

Table 18.4 ... (...)

	A	B	D
I	30 GB	20 GB	35 GB
D	10 GB	6 GB	9 GB

...

A ... 86, ... 84 ... (41, ... 10.2, 57). A ... 85, ... 25 ...

A ... *compromise effect*: I ... 18.5 ... A ... B ... D ... 82, ... (18.2.8).

... 41, ... 10.2 .

18.8.2 Order Effects

A ...

1. ...
2. ... B ...

Table 18.5 E

	A	B	D
I	30	20	55
D	10 GB	6 GB	16 GB

- ... *satisficing*: ...
3. I ... *primacy* ... *recency*. ... (... 50, C ... 8).
- H ... 24 ...

18.8.3 Framing Effects

... *framing effects*. L ... 48 ...

Attribute framing, ...

... 75% ... 25% ... 47. A ... 95% ... 5% ...

... (...) ...

A ... *risky choice framing* ... *goal framing*. L ... 48 ...

18.8.4 Priming Effects

A. ... *prime*, ... 55; ...

1. I. ... 55 ...
2. I. ... H. ... 31, ...

... A ...

18.8.5 Defaults

... *default* ...

1. ...

... .. I

... ..

Acknowledgements
 2011
 A 2011¹⁴ AC 2011,¹⁵ 2012,¹⁶ 2013,¹⁷ 2014¹⁸;
 AC
 I 14;
 B¹⁹

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¹⁴ /D

¹⁵ //r :8080/ 2011/.

¹⁶ //r / 2012.

¹⁷ //r /

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¹⁹ //l

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