

Group Decision Making and Leveraging of Interests

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Why group decision making?

More heads are better than one.

Human right

Democracy

Complexity

Change management

Educational process

Problems

Too many cooks spoil the broth.

Organizational climate:

- Motivation
- Knowledge
- Hate-free environment

Price

Different interests

Responsibility

Manipulation

Different interests

Differences in preferential knowledge

Values

Principles

Knowledge

Understanding of circumstances

Relation to decision problem

...

Coping with different interests

No cooperation

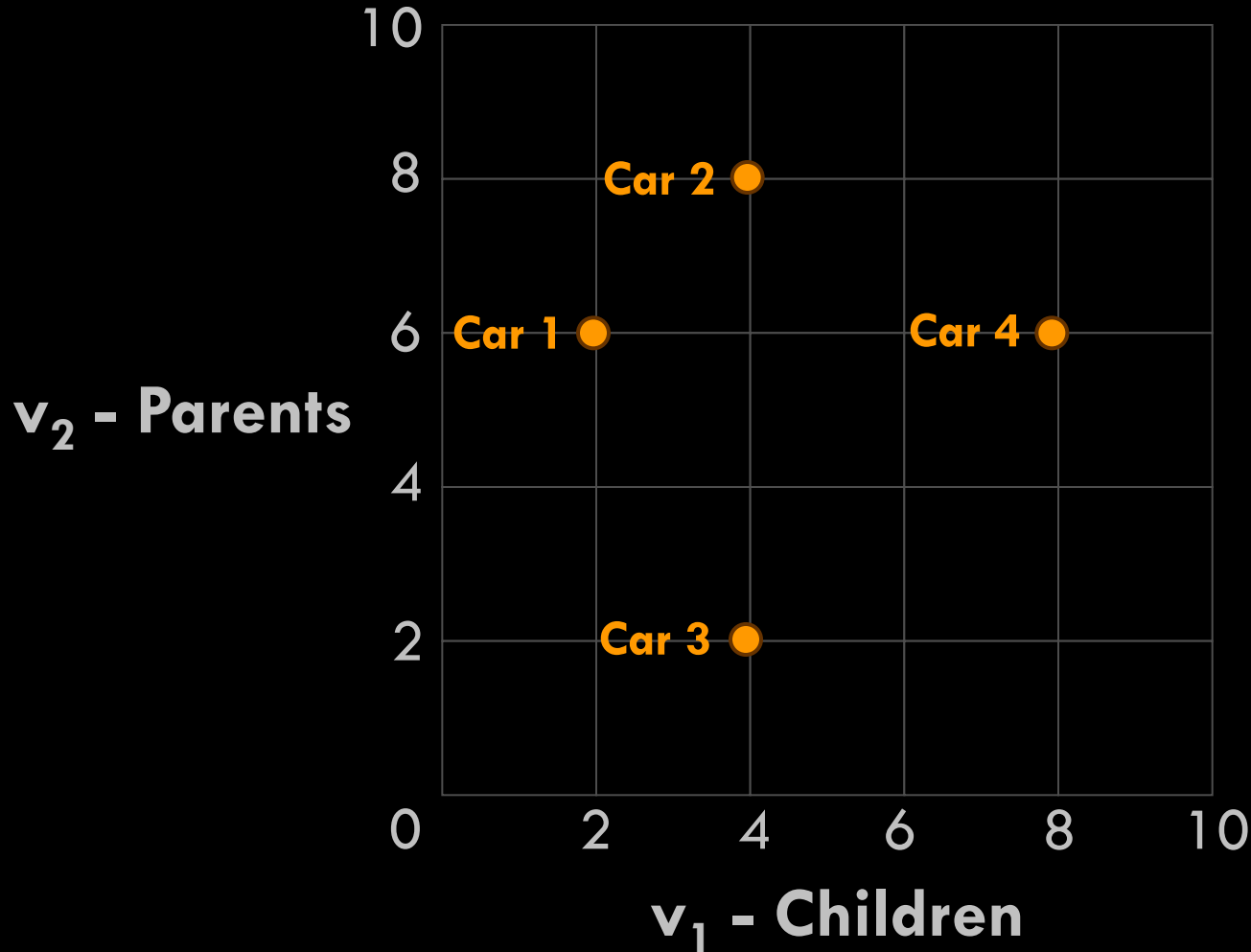
- Voting
- Scoring
- Multi-attribute

Arrow's theorem

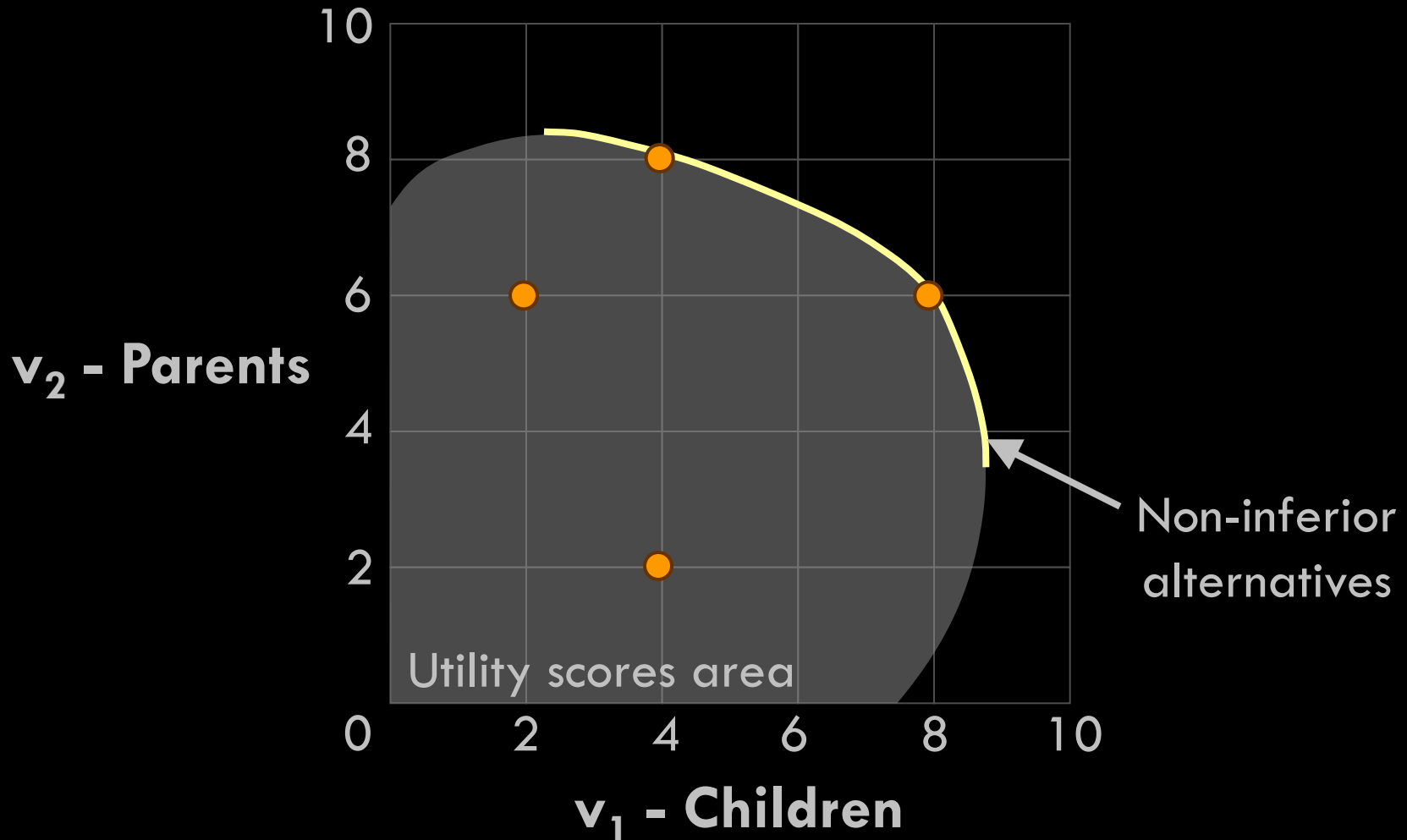
Cooperation – compromise solution

- Hierarchical multi-attribute modeling
- Expert system approach

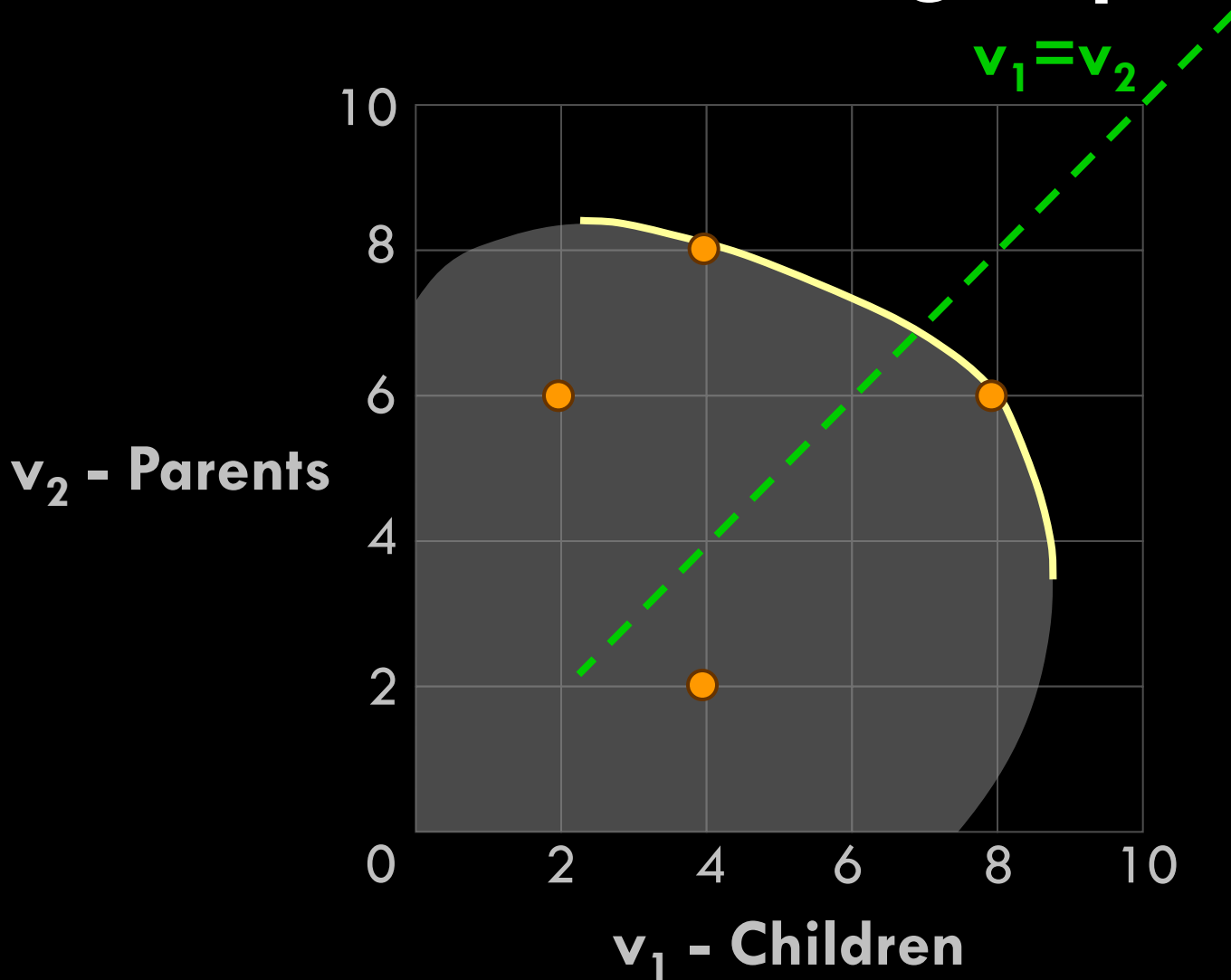
Comparison of alternatives evaluated by two different groups



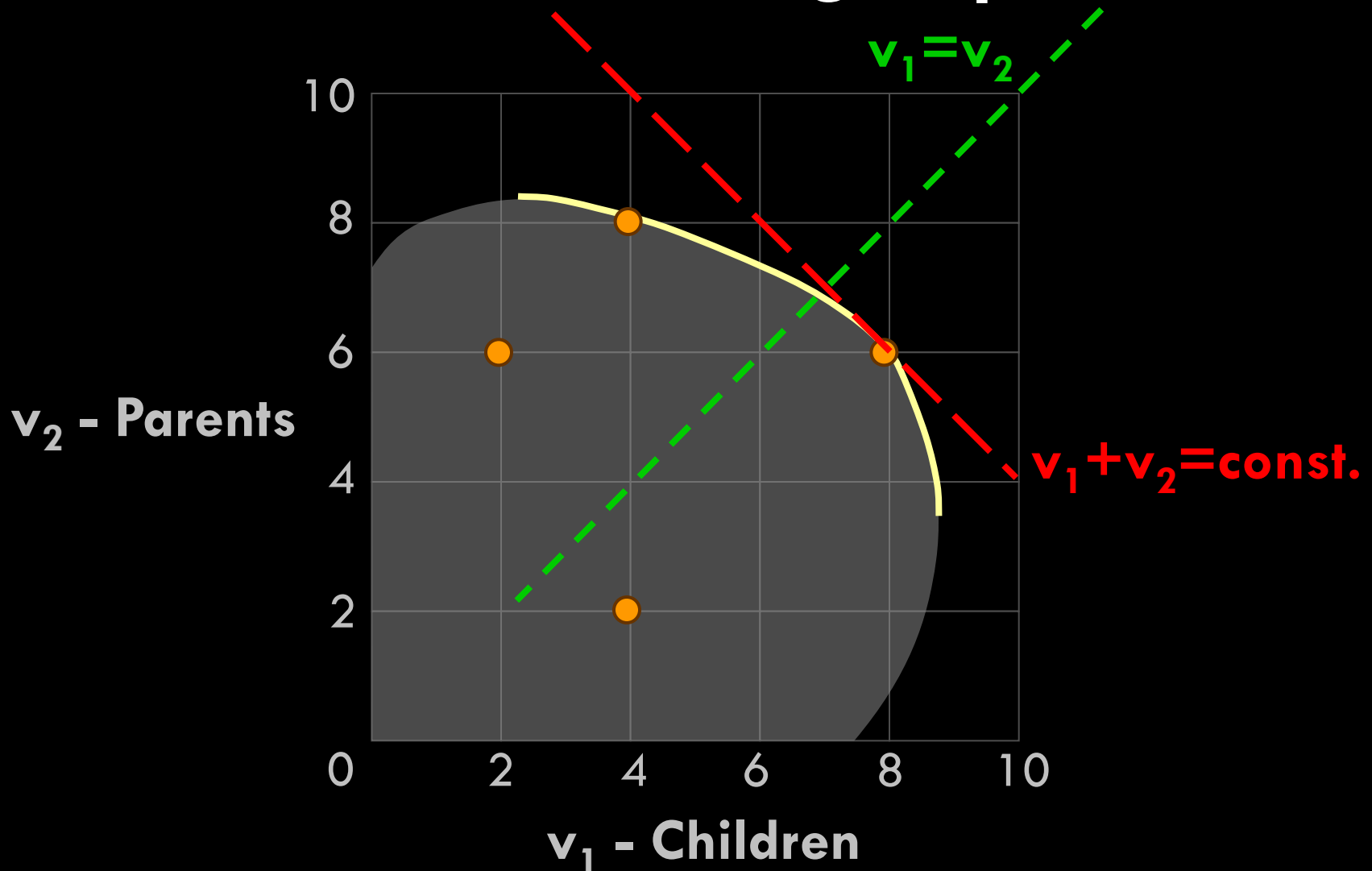
Comparison of alternatives evaluated by two different groups



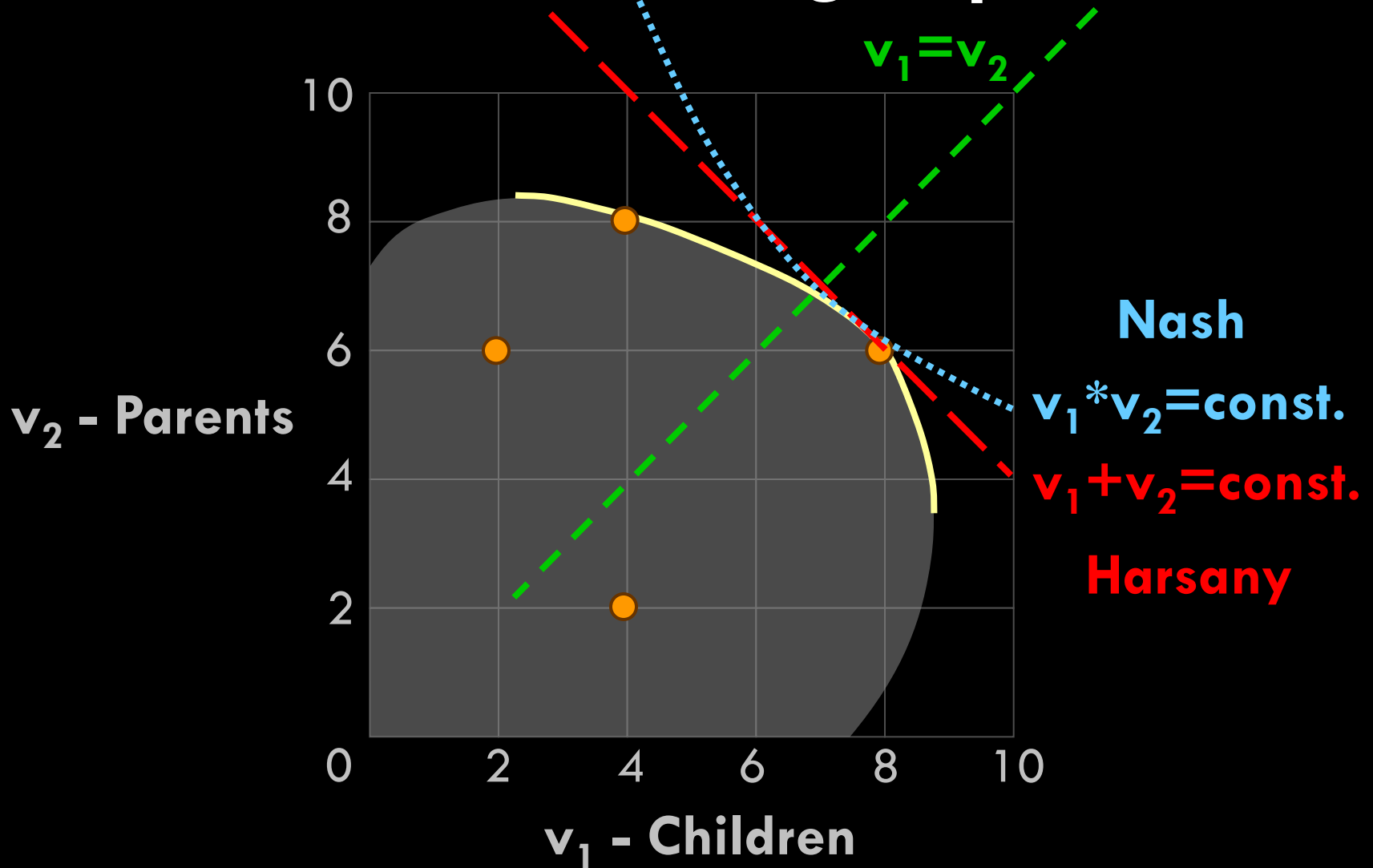
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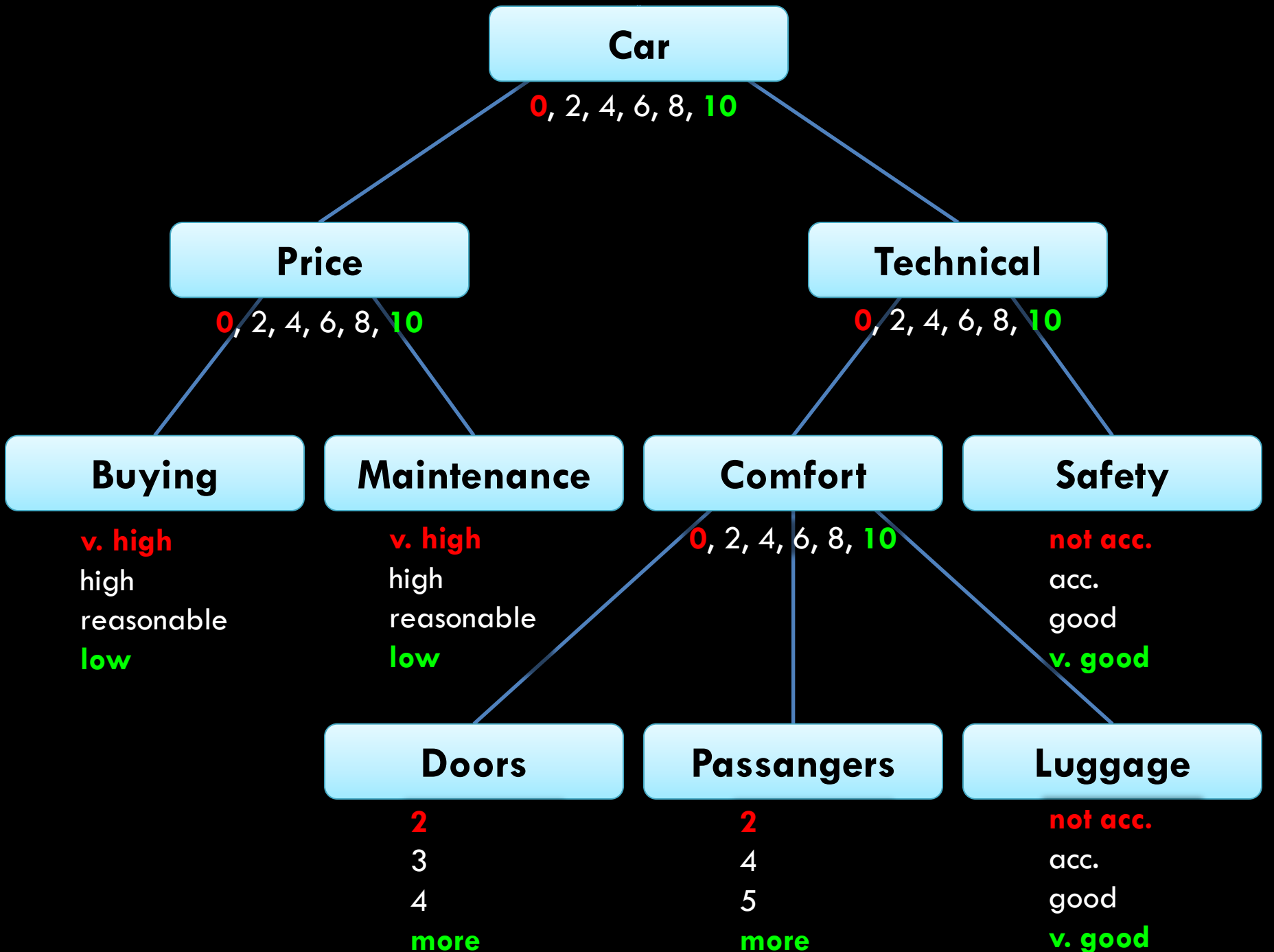


Comparison of alternatives evaluated by two different groups



Comparison of alternatives evaluated by two different groups





Comparison of different evaluation results for alternative Car 3

Attribute	Parents	Children
Car	2	4
Price	6	8
Buying	low	
Maintenance	high	
Technical	2	
Comfort	4	2
Doors	3	
Passengers	5	
Luggage	acc.	
Safety	good	

Buying

Maintenance

Price

Parents
58% : 42%

Children
64% : 36%

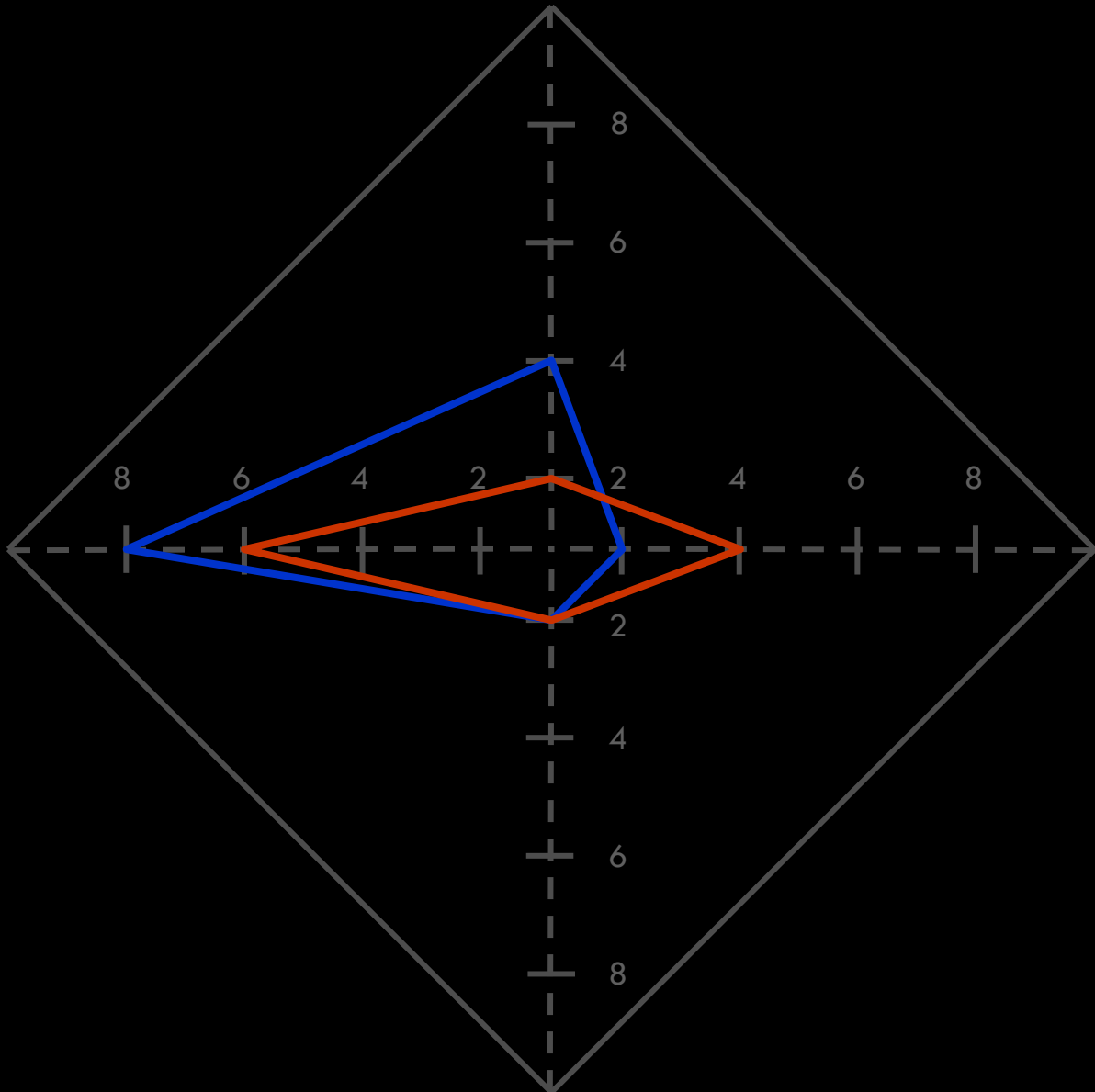
1	v. high	v. high	0	
2	v. high	high	0	
3	v. high	reasonable	0	
4	v. high	low	0	
5	high	v. high	0	
6	high	high	2	
7	high	reasonable	2	
8	high	low	6	4
9	reasonable	v. high	0	
10	reasonable	high	2	
11	reasonable	reasonable	6	
12	reasonable	low	8	
13	low	v. high	4	6
14	low	high	6	8
15	low	reasonable	8	10
16	low	low	10	

Car

Price

Comfort

Technical



Parents
Children

*Do not consider only oneself
but also everyone else involved.*