

MCDA in Store of Films

using PROMETHEE

Content

Definition of the Problem

PROMETHEE Data

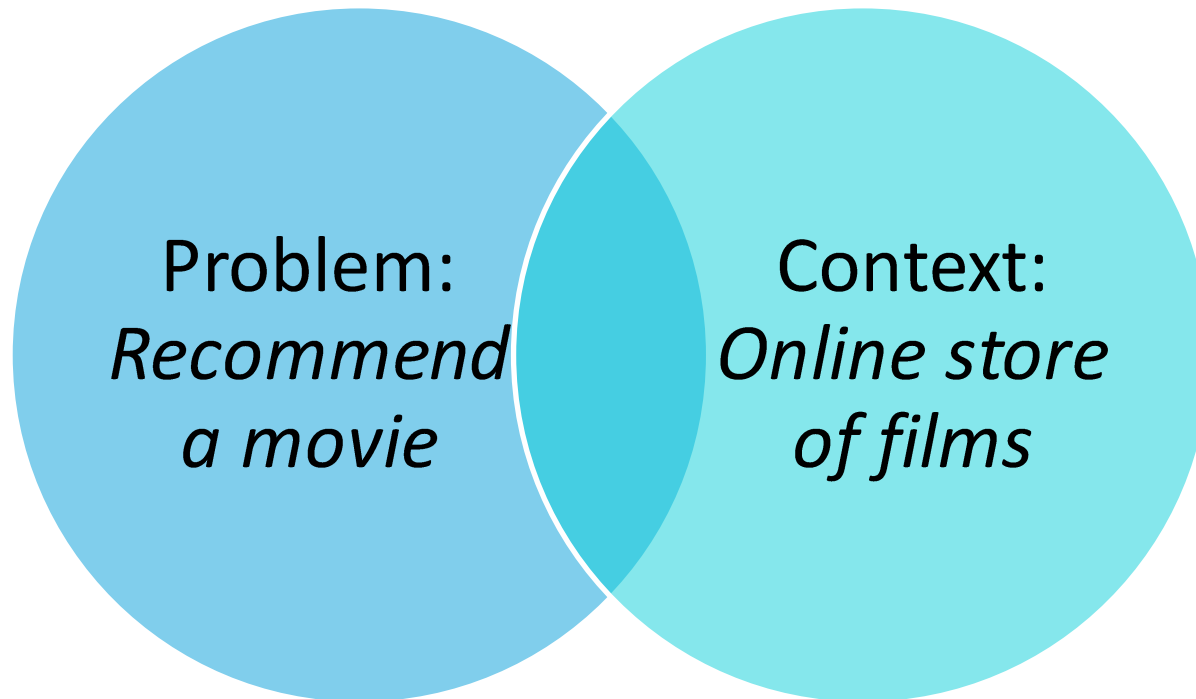
PROMETHEE Workflow

PROMETHEE Results

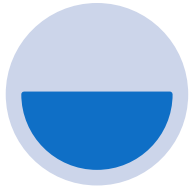
Conclusions

References

Definition of the Problem

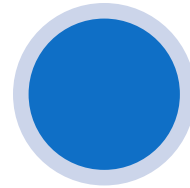


PROMETHEE Data



Criteria

Title
Genre
Release Year
Price
Duration
Rating
Meta-Score
Awards



Alternatives

The Notebook
Pulp Fiction
Frozen
Lion King
Elite Squad
Home Alone
Lord of War
Silver Linings Playbook
Star Wars
The Conjuring

PROMETHEE Data

Title	Genre	Release Year	Price	Duration	Rating	Meta-Score	Awards
1 – 10	1- 10	1 - 10	Euros	Minutes	1 – 10	1 – 100	# Awards



Horror = 2
 Romantic = 3
 Drama = 6
 Animation = 7
 Comedy = 7
 Action = 7
 Crime = 7.5
 Thriller = 8
 Adventure = 8.5
 Sci-Fi = 9



Release Year

1970-1980 = 5
 1981-1990 = 8
 1991-2000 = 8
 2000-2010 = 7
 2010-2014 = 8

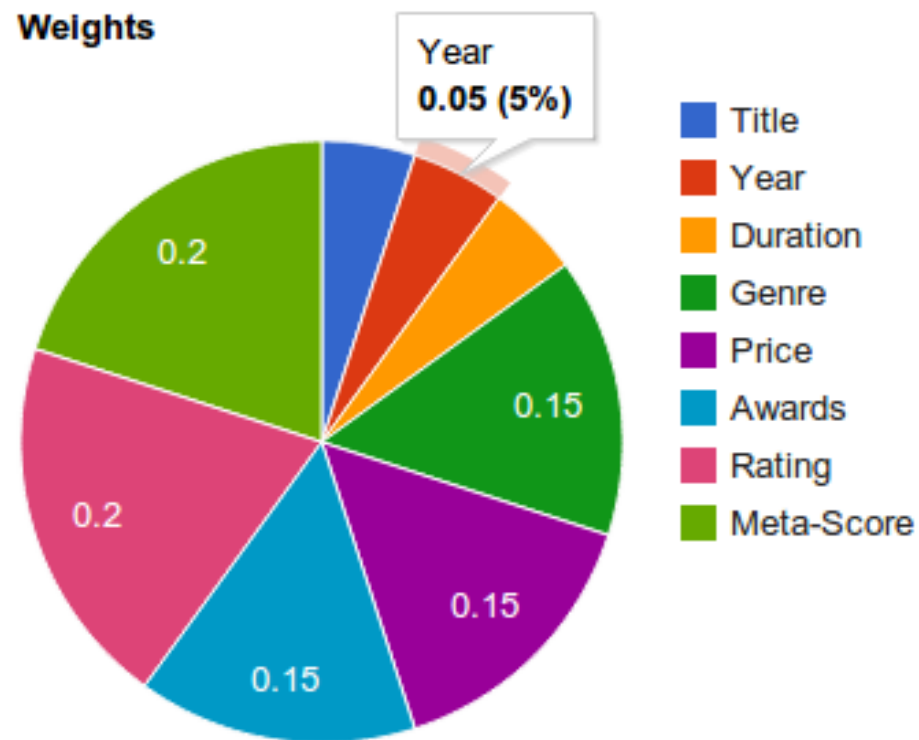


Other Criteria

Metacritic
 Amazon
 IMDB

Performance Matrix

PROMETHEE Data



PROMETHEE Data

	Title	Genre	Release Year	Price	Duration	Rating	Meta-Score	Awards
Ind.	6.0	5.0	6.0	0.0	0.0	7.0	70	0
Pref.	8.0	9.0	8.0	10.0	130.0	9.0	90	3
Veto	-	3.0	-	15.0	180.0	4.0	40	-
Direction	Max.	Max.	Max.	Min.	Min.	Max.	Max.	Max.

PROMETHEE Workflow

Based on pairwise comparisons
Outranking Flows

Positive
Outranking Flow:

a outranks
others

power of
the
alternative

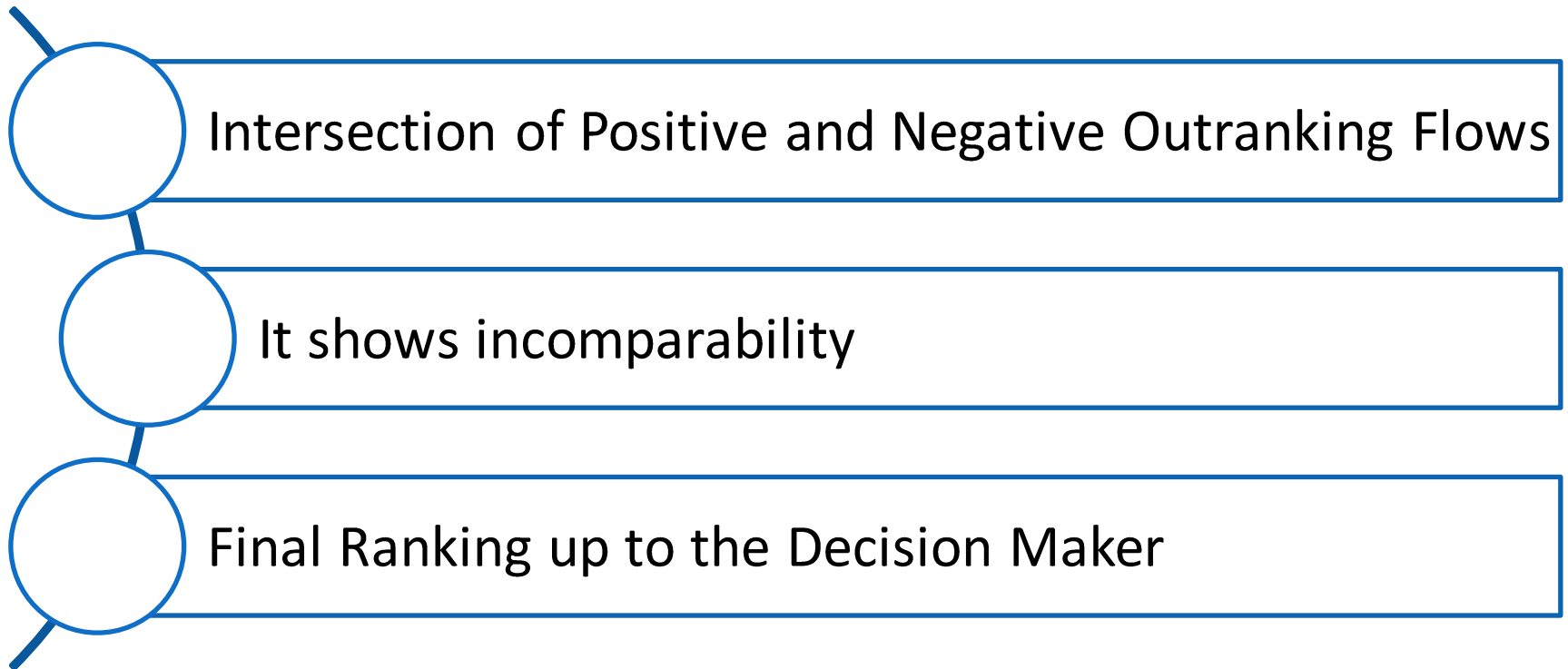
Negative
Outranking Flow:

a is
outranked
by others

weakness
of the
alternative

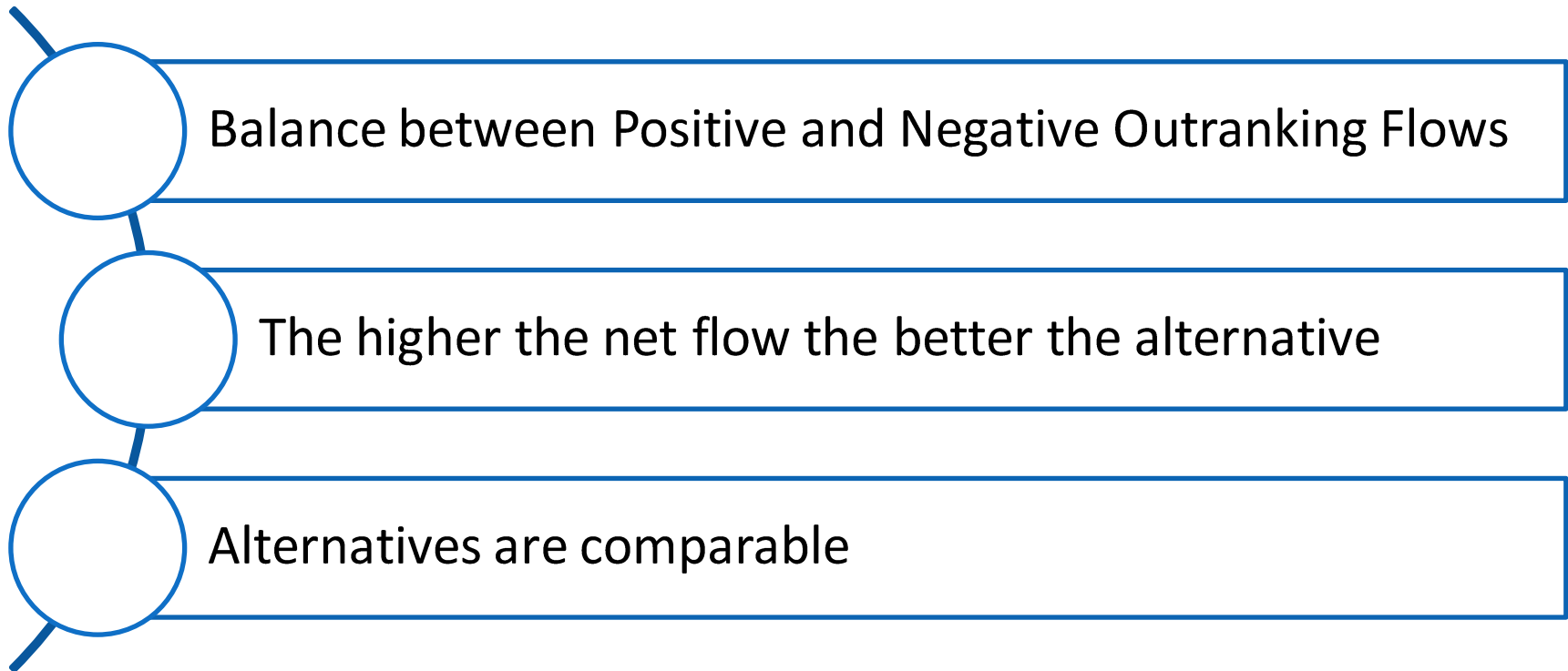
PROMETHEE Workflow

PROMETHEE I: Partial Ranking

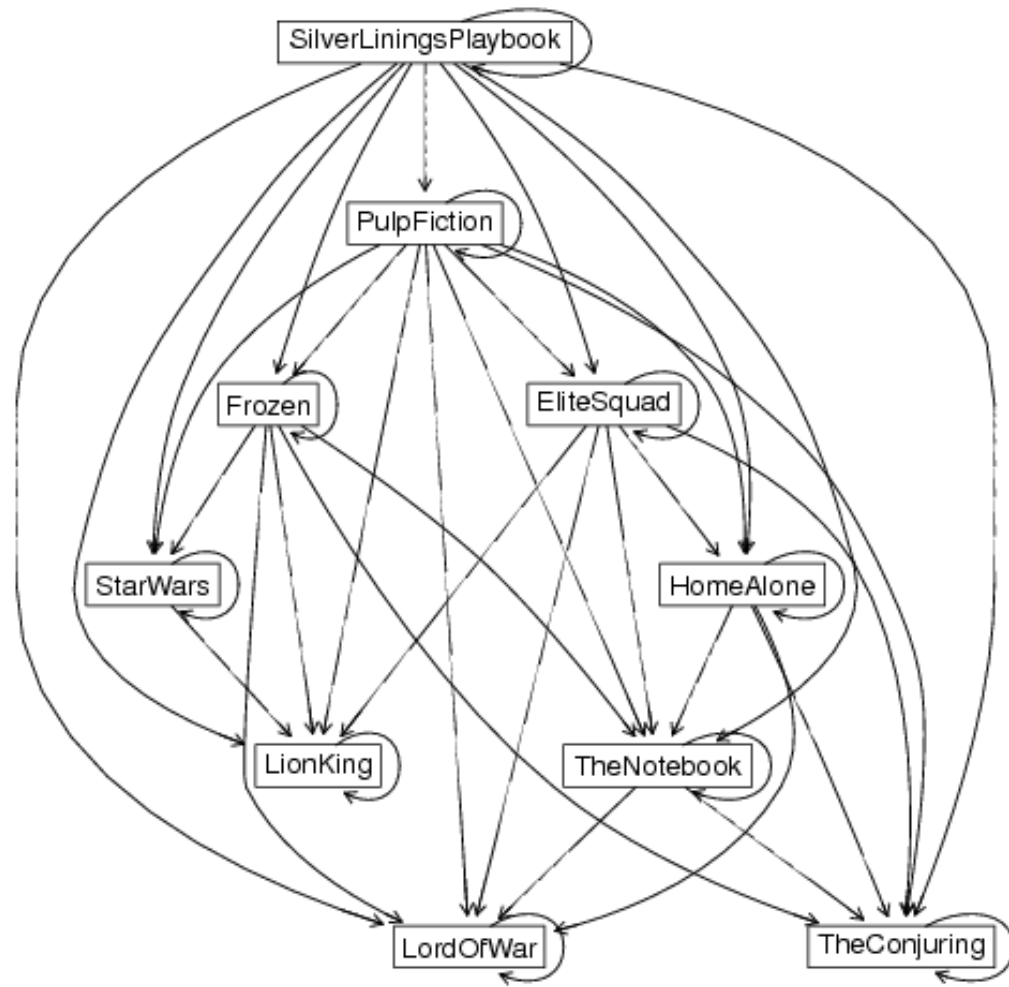


PROMETHEE Workflow

PROMETHEE II: Complete Ranking

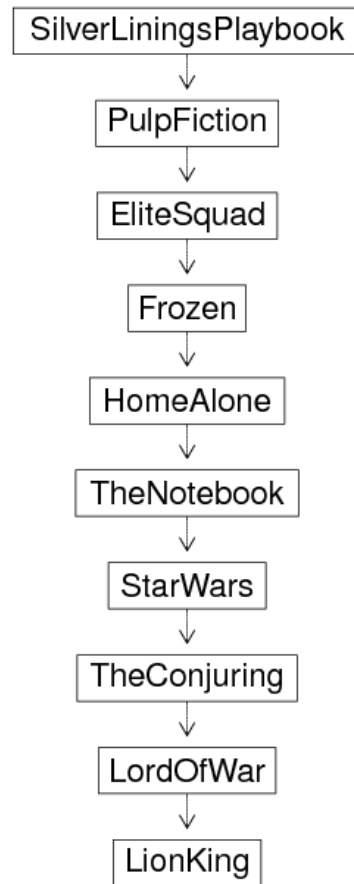


PROMETHEE Results



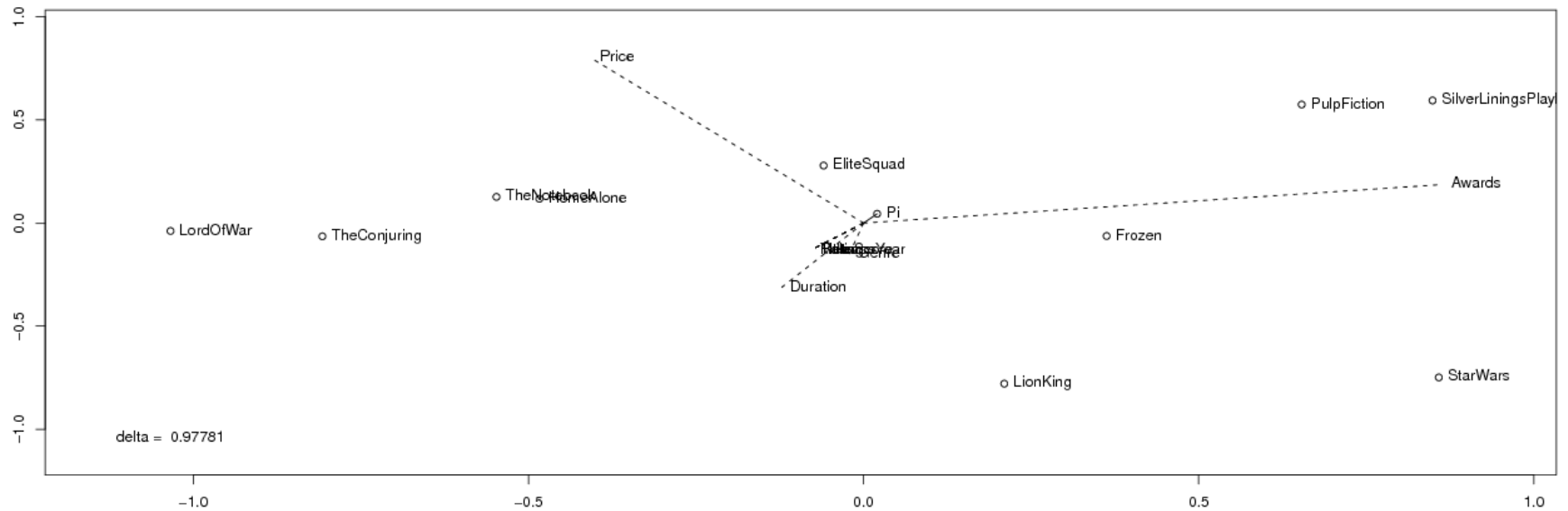
PROMETHEE I

PROMETHEE Results



PROMETHEE II

PROMETHEE Results



Conclusions

PROMETHEE II is simpler than PROMETHEE I, to make an interpretation, but incomparability is not clear on it.

PROMETHEE I lets the decision maker to deal with incomparability

Gaia provides better understanding of the global data

References

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