



Fashion & Modernization – How to Understand Costumes in Films

Dr. Johanna Barzen

University of Stuttgart
Institute of Architecture of Application Systems

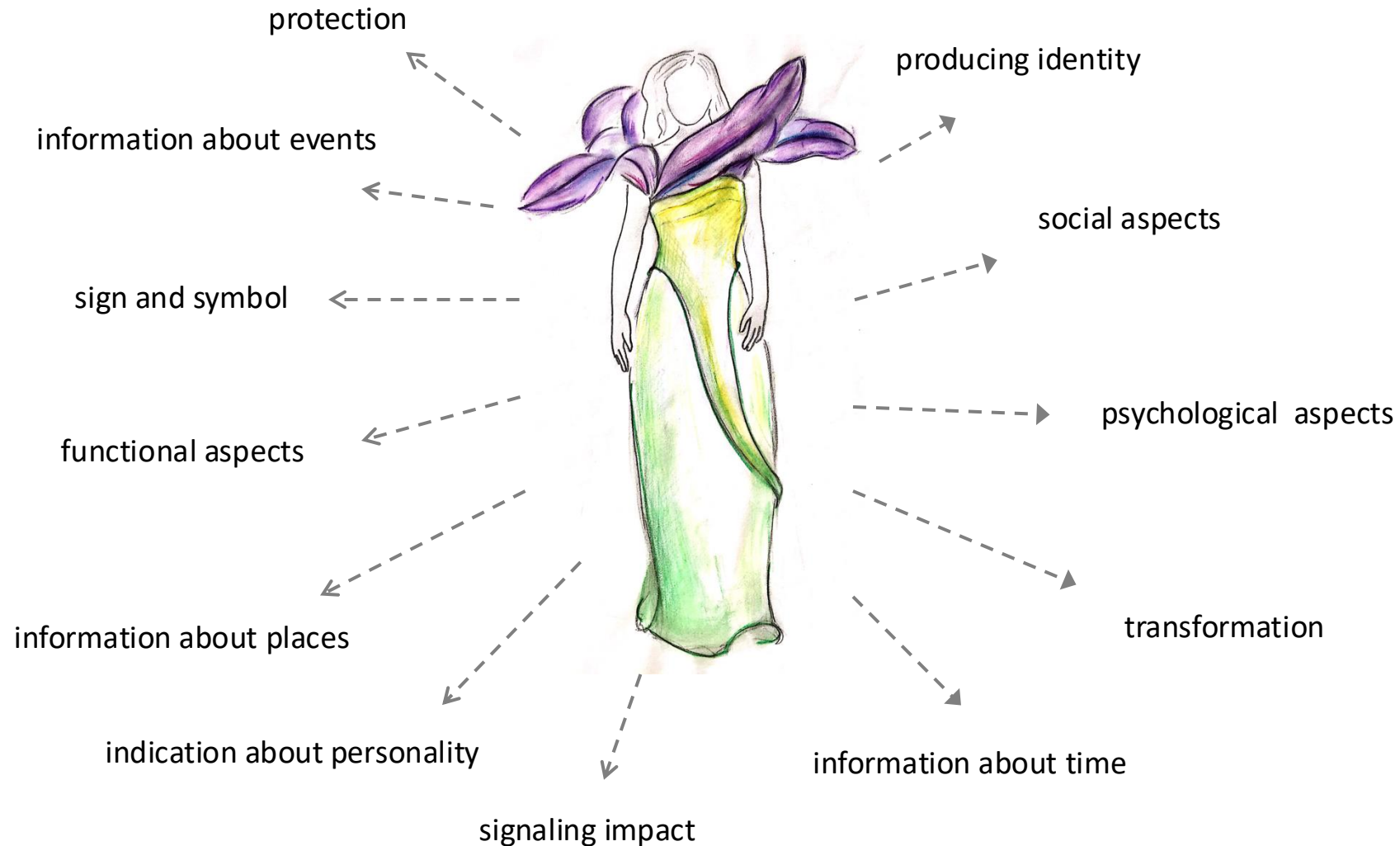
Motivation



Starting Point



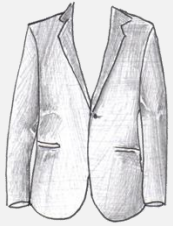
Tasks and Functions



Vestimentary Communication



Three Levels Needed:



clothes

- Materiality of everything we wear



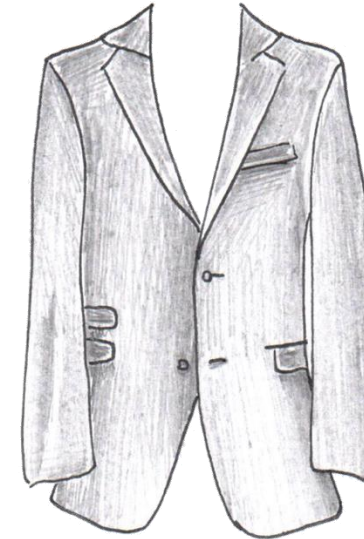
fashion

- „intangible meaning“ (Roland Barthes)

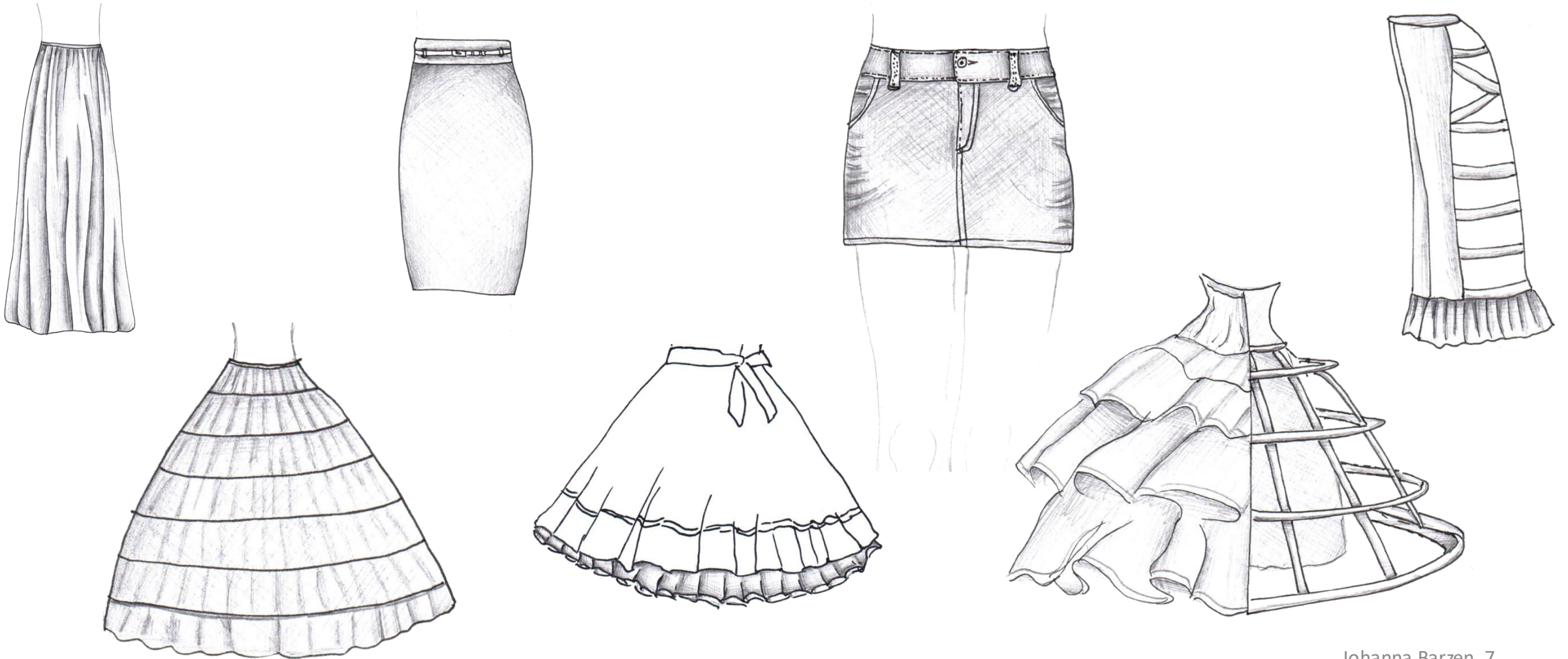


costume conventions

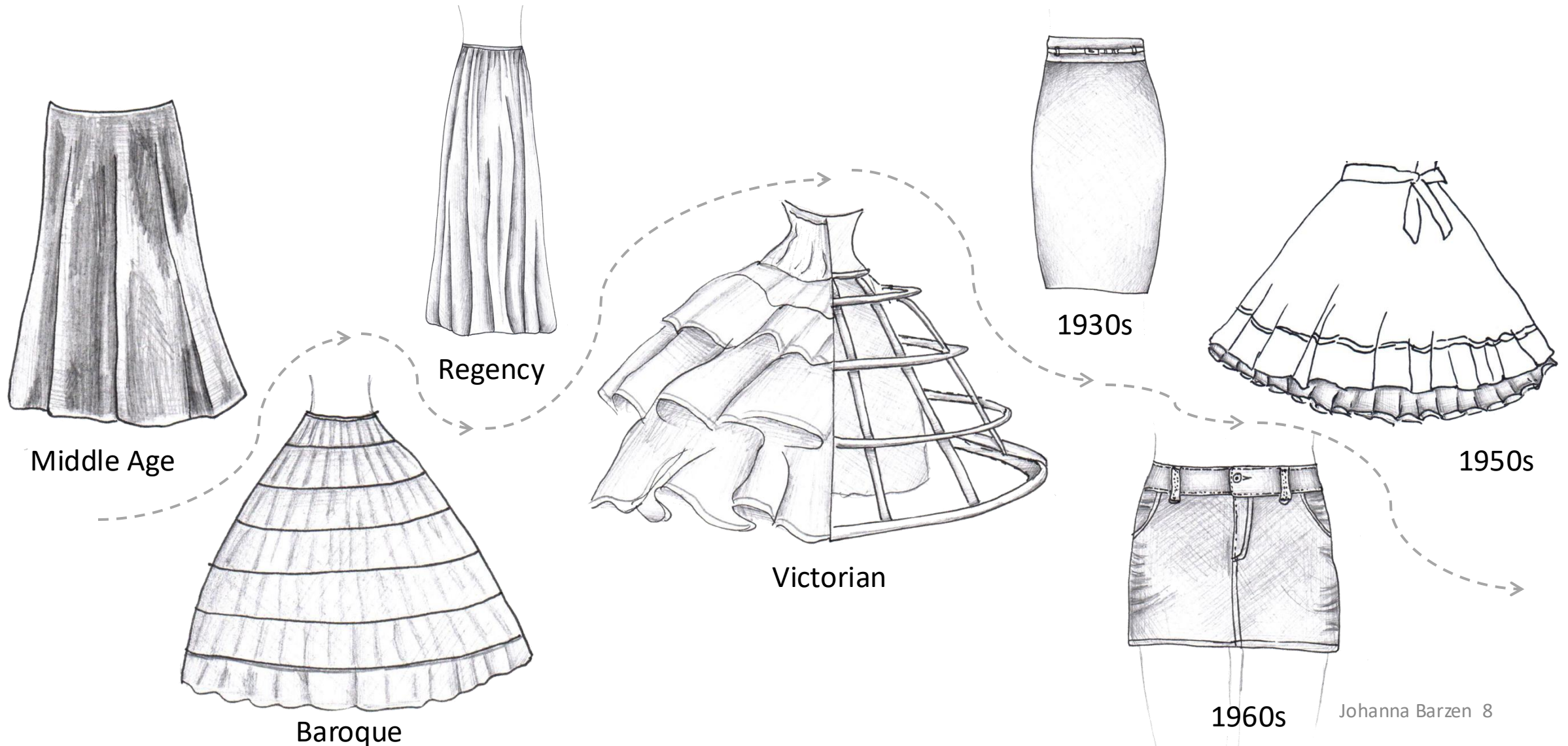
- Recognition based on media socialization



Fashion & Modernization

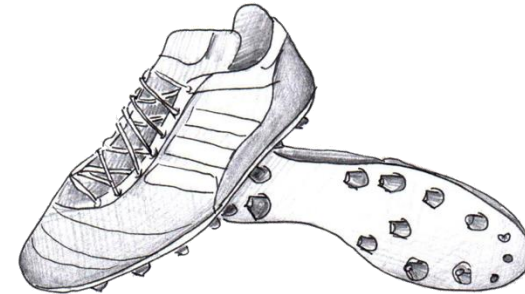
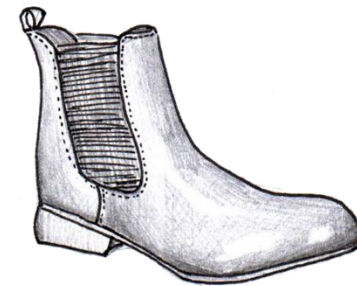
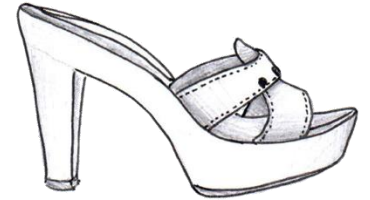
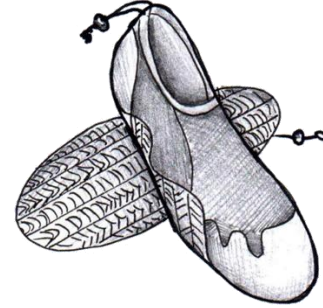
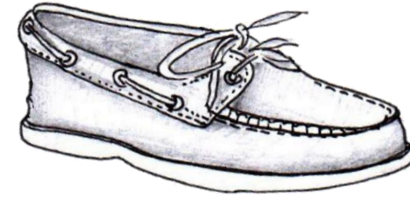
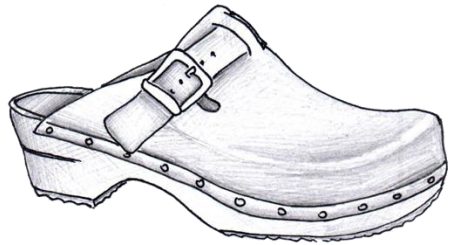


Fashion & Modernization



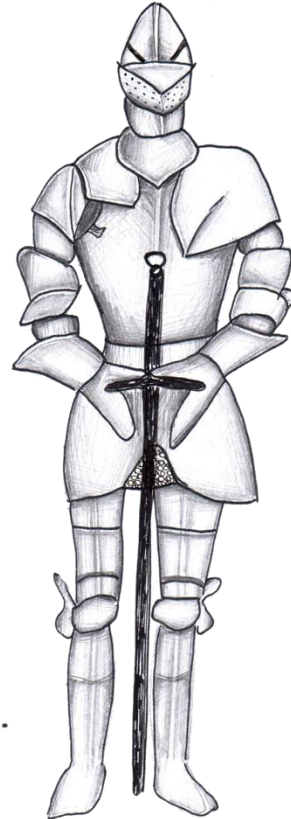
Fashion in Film

- Designing the character



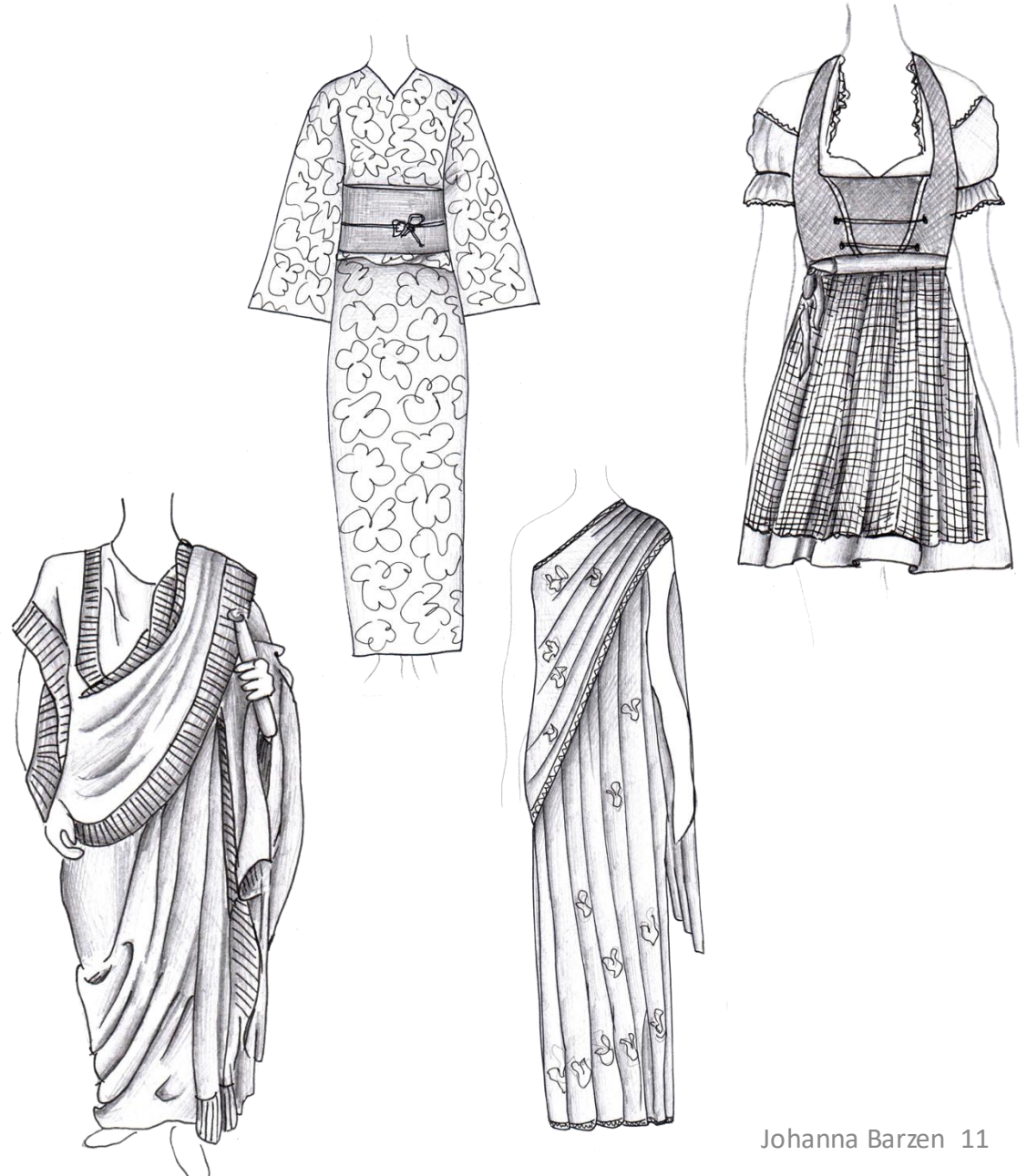
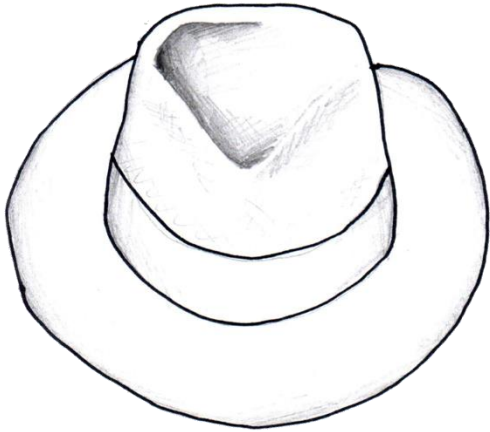
Fashion in Film

- Designing the character
- Positioning in time



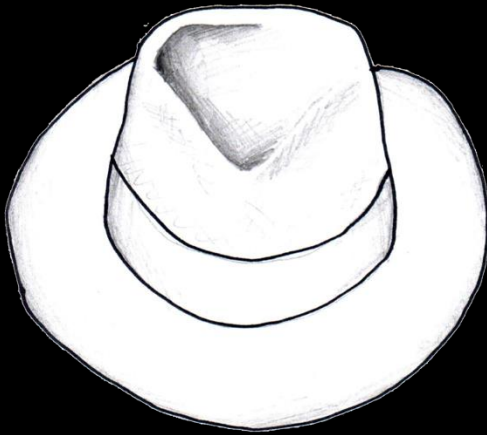
Fashion in Film

- Designing the character
- Positioning in time
- Positioning in the environment



Fashion in Film

- Designing the character
- Positioning in time
- Positioning in the environment

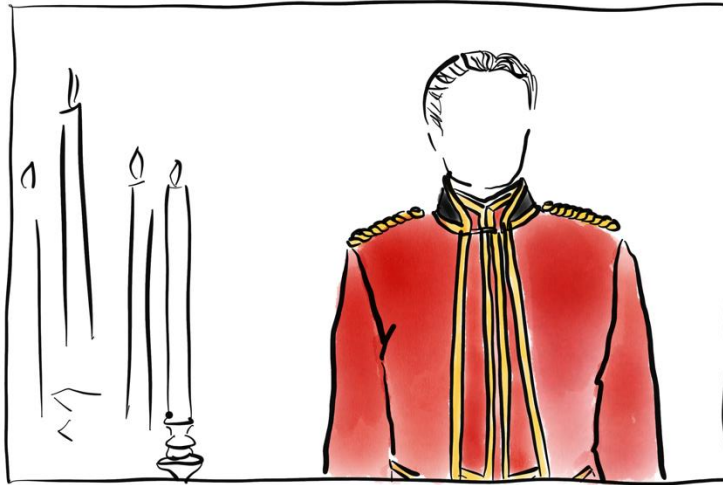


Fashion in Film

- Designing the character
- Positioning in time
- Positioning in the environment
- Transformation



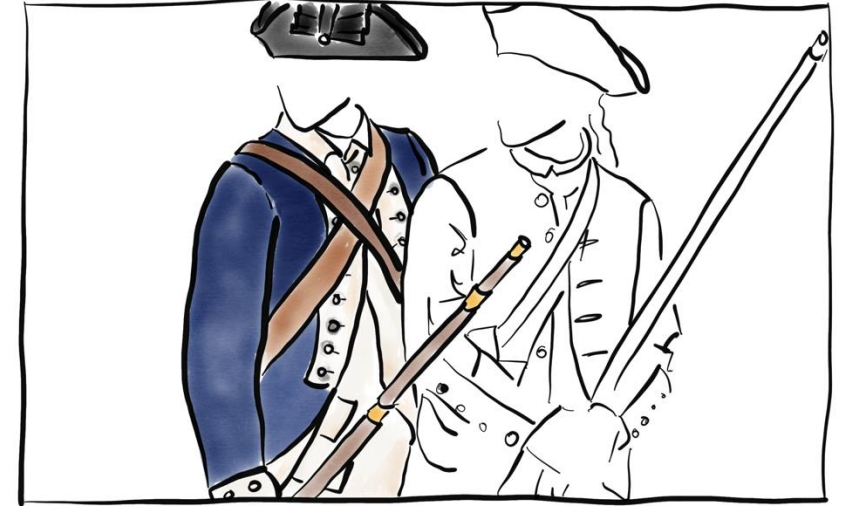
Case Study “Heath Ledger”: Positioning in Time



The Four Feathers 2002,
D: Shekhar Kapur



A Knight's Tale, 2001,
D: Brian Helgeland

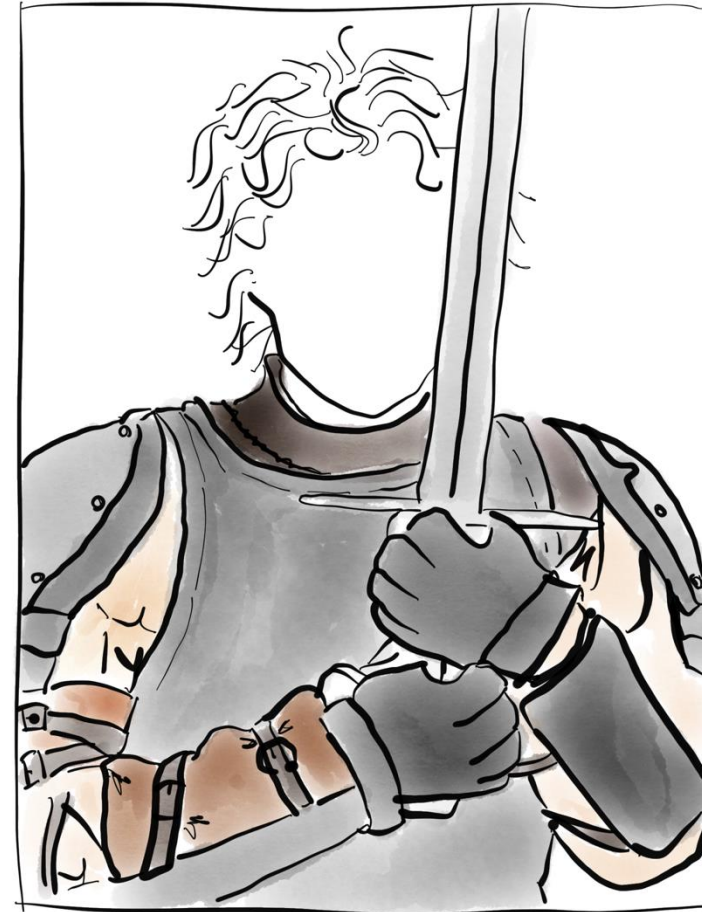


The Patriot, 2000,
D: Roland Emmerich

Case Study “Heath Ledger”: Social Status and Transformation



A Knight's Tale, 2001,
D: Brian Helgeland



Case Study “Heath Ledger “: Personality Aspects

The Dark Knight, 2008,
D: Christopher Nolan

10 Things I Hate About You, 1999,
D: Gil Junger



How to Extract A Costume Language?



Concept of “Costume Languages”

State of research:

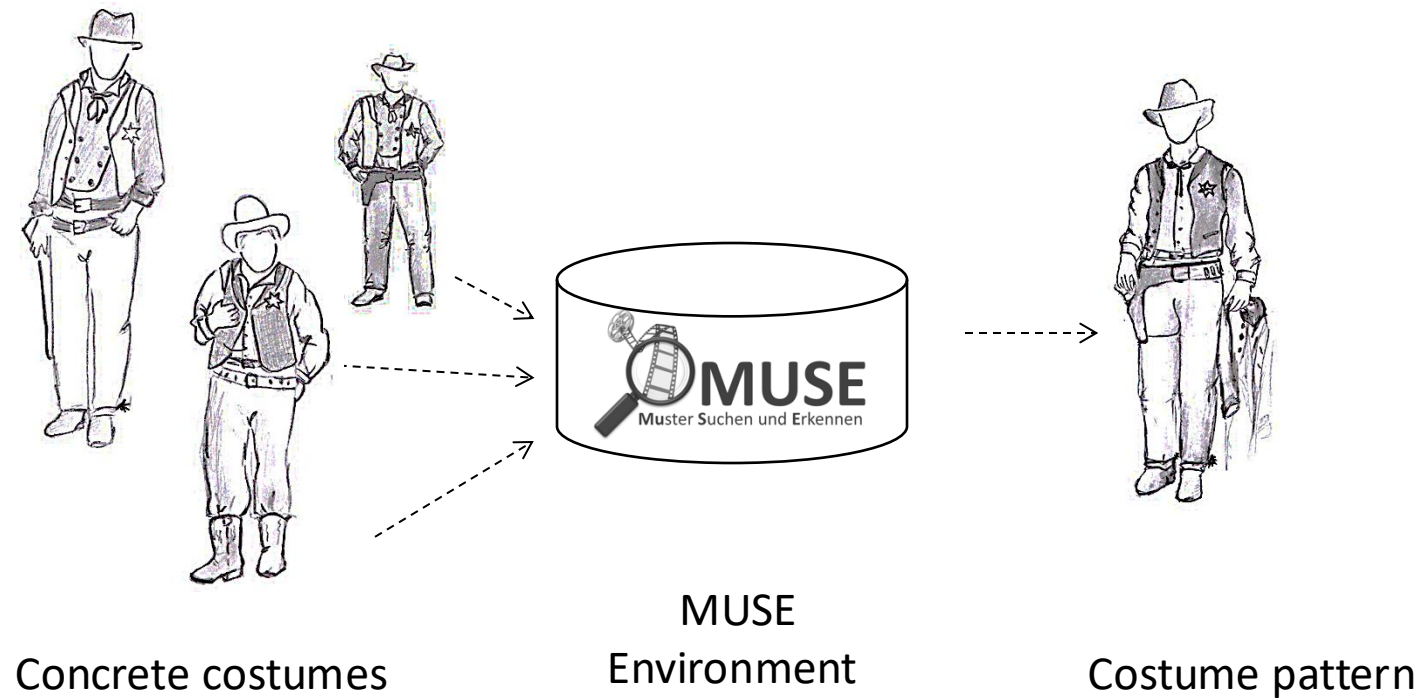
- understanding costumes as a 'speaking system'
- mostly used in a metaphorical sense

Observation:

- clothing that is used “in the same way” can be identified
- costume designers rely on “proven solutions for recurring problems”



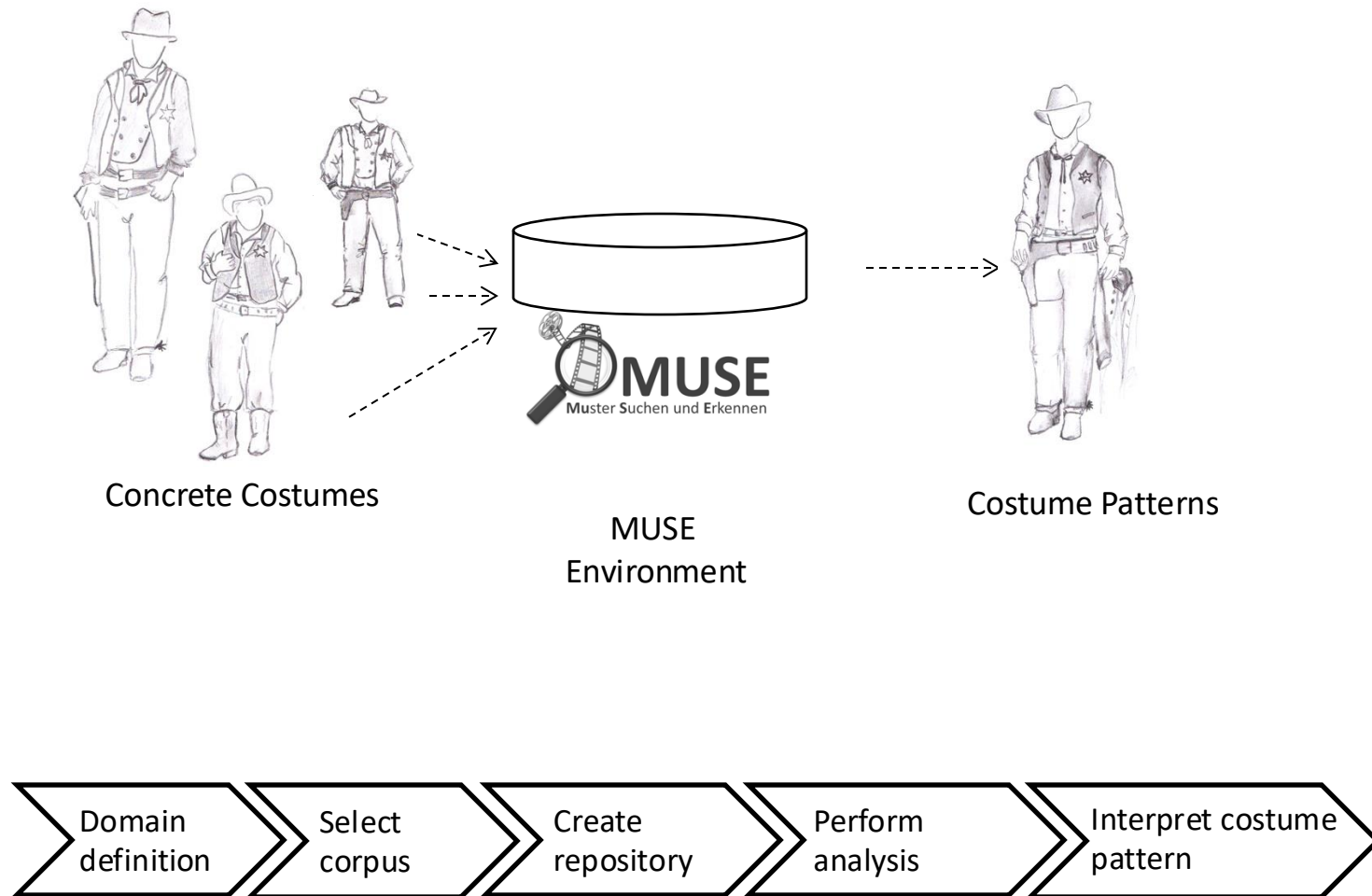
Main Idea



The Pattern Concept

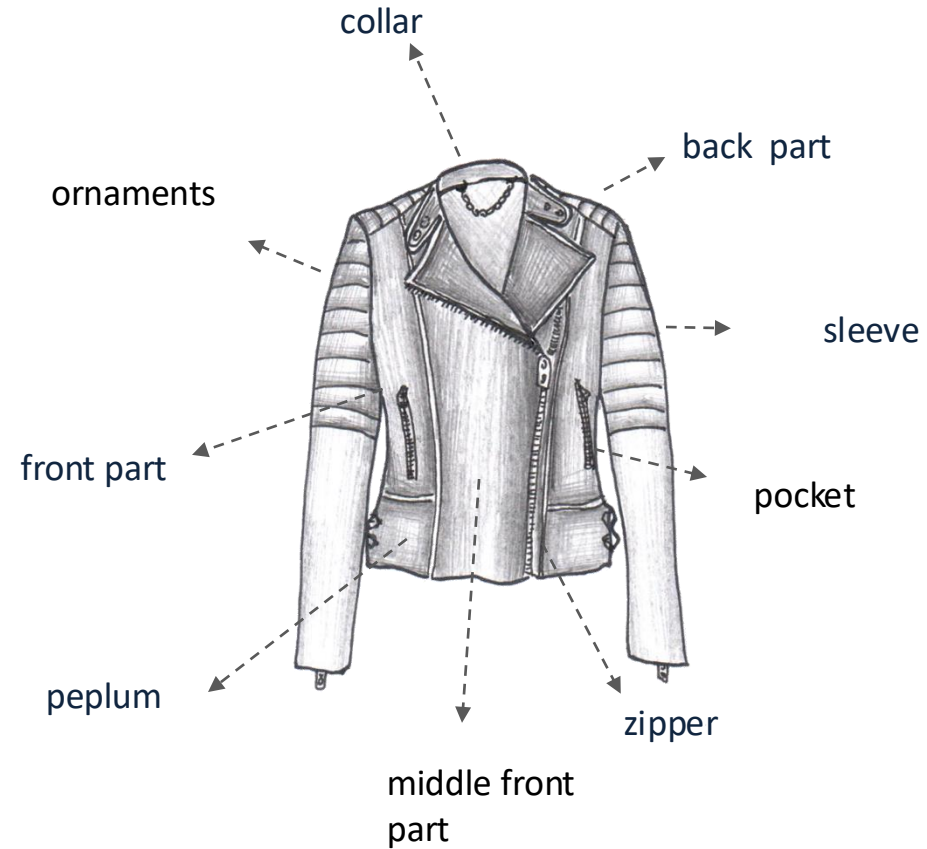
- Pattern
 - Document of proven solutions for recurring problems
- Costume pattern
 - Proven solution to a recurring costume design problem
- Costume language
 - Network of different costumes patterns that refer to each other

The Approach

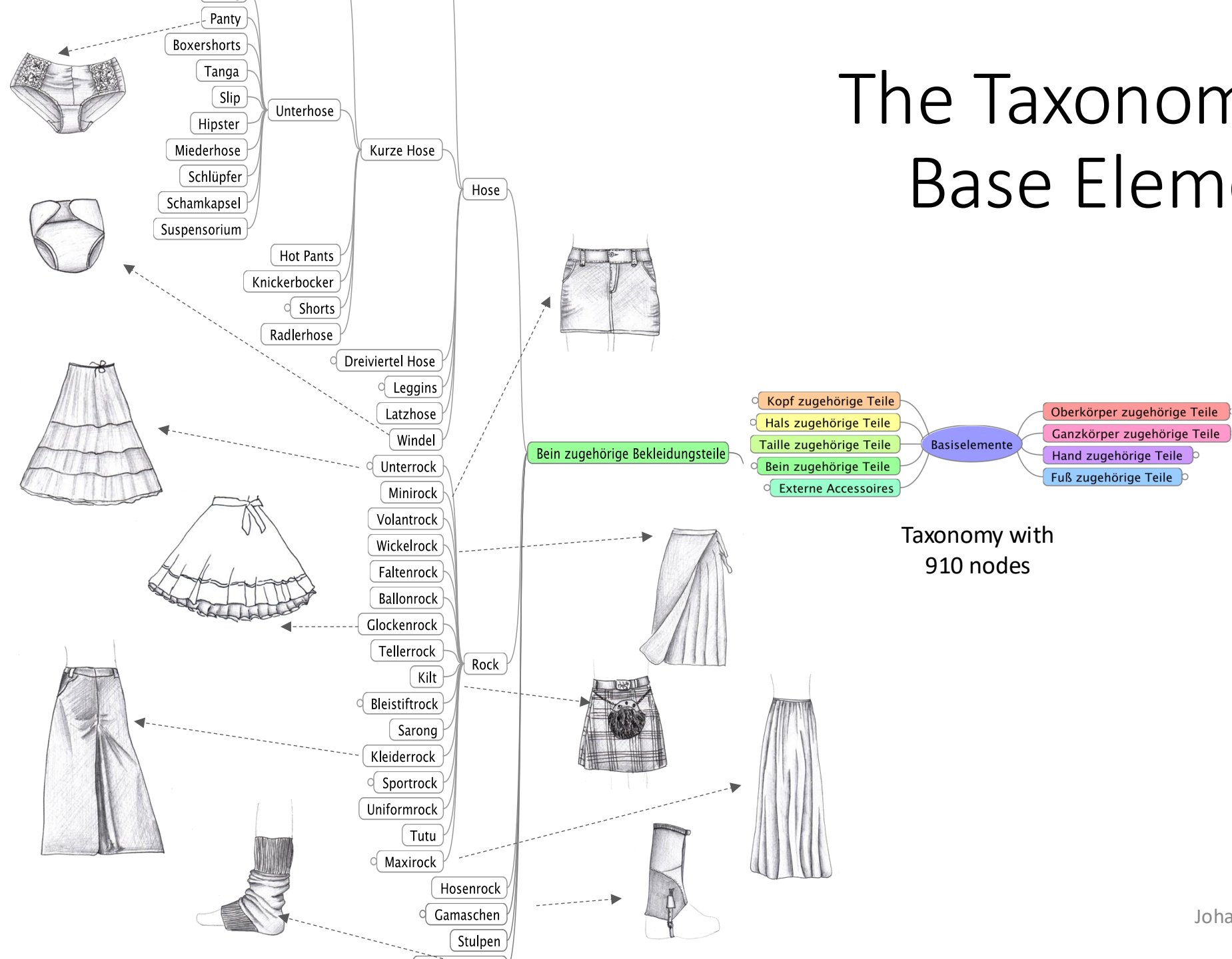


Costume-Relevant Parameters

- Base elements
- Primitives
- Designs
- Shapes
- Material
- Colour
- Status
- Ways of wearing
- Function
- Body modification



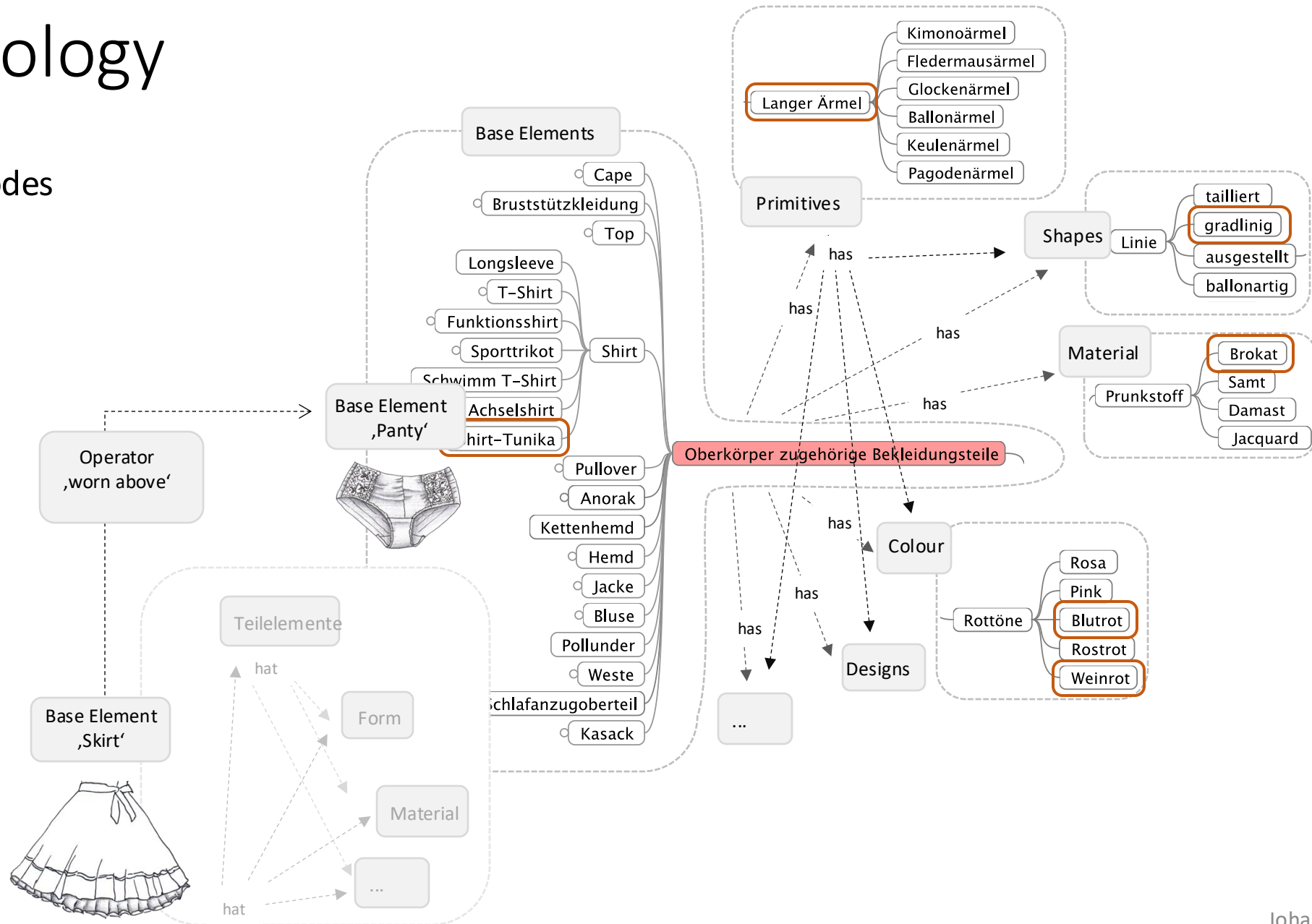
The Taxonomies: Base Elements

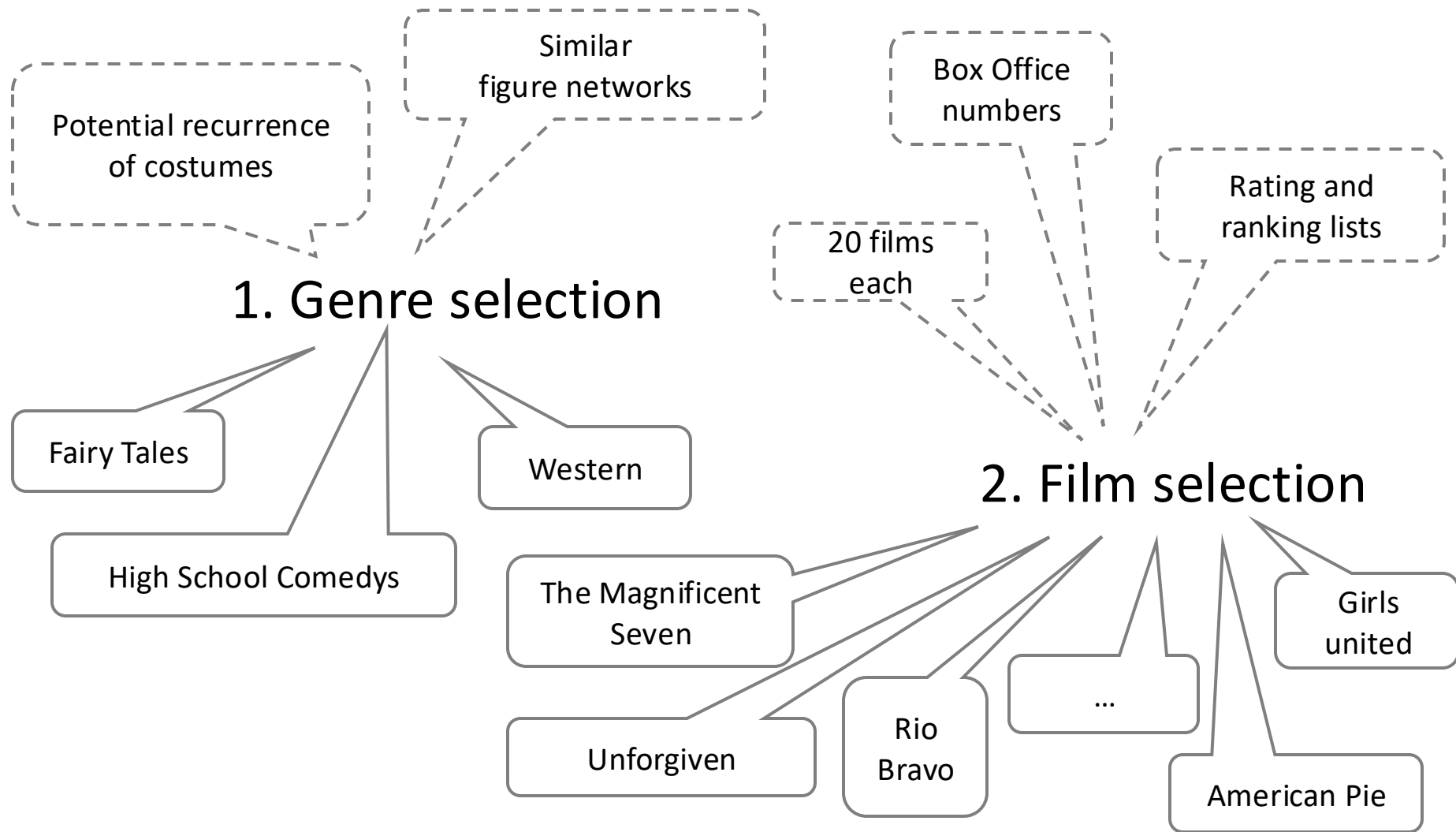


Taxonomy with
910 nodes

Ontology

3151 nodes





MUSE Costume Repository
Film Overview
Genreoverview
Search
Analyse
Taxonomies
User
DE
EN

Film Overview

Create and Search Films

Create New Film

List of Films 68

4

Film Title	Original Titel	Director	
10 Dinge, die ich an dir hasse	10 Things I Hate About You	Gil Junger	i x
21 Jump Street	21 Jump Street	Phil Lord	i x

A 2

Film Title	Original Titel	Director	
American Pie: Wie ein heißer Apfelkuchen	American Pie	Paul Weitz	i x
American Pie 2	American Pie 2	J.B. Rogers	i x



Composition Overview of 10 Dinge, die ich an dir hasse - Katarina Stratford - Freizeitoutfit 5

Films / Films: 10 Dinge, die ich an dir hasse / Role: Katarina Stratford / Costume: Freizeitoutfit 5 / Composition Overview

Pics 1



Costume Data

Short Text Freizeitoutfit 5

Description of Scene in der Schule

Timecodes 4 ✓

Timecode Start (hh:mm:ss) 00:00:00

Timecode End (hh:mm:ss) 00:00:00

Timecode Start (hh:mm:ss)

Timecode End (hh:mm:ss)

00:51:15

00:52:33

00:51:34

00:51:42

00:51:48

00:51:51

00:51:57

00:52:13

Occurence of Destination

☒ Indoors

☐ outdoors

☐ indoors and outdoors

Stereotype relevant

☒ yes

☐ no

☐ neutral

Dominant Colour

Schwarz

Colours from Base Elements

Schwarz Silber Dunkelviolett Orange Blutrot

Dominant Function

Freizeitkleidung

Functions of Base Elements

Freizeitkleidung

Dominant Status

abgetragen

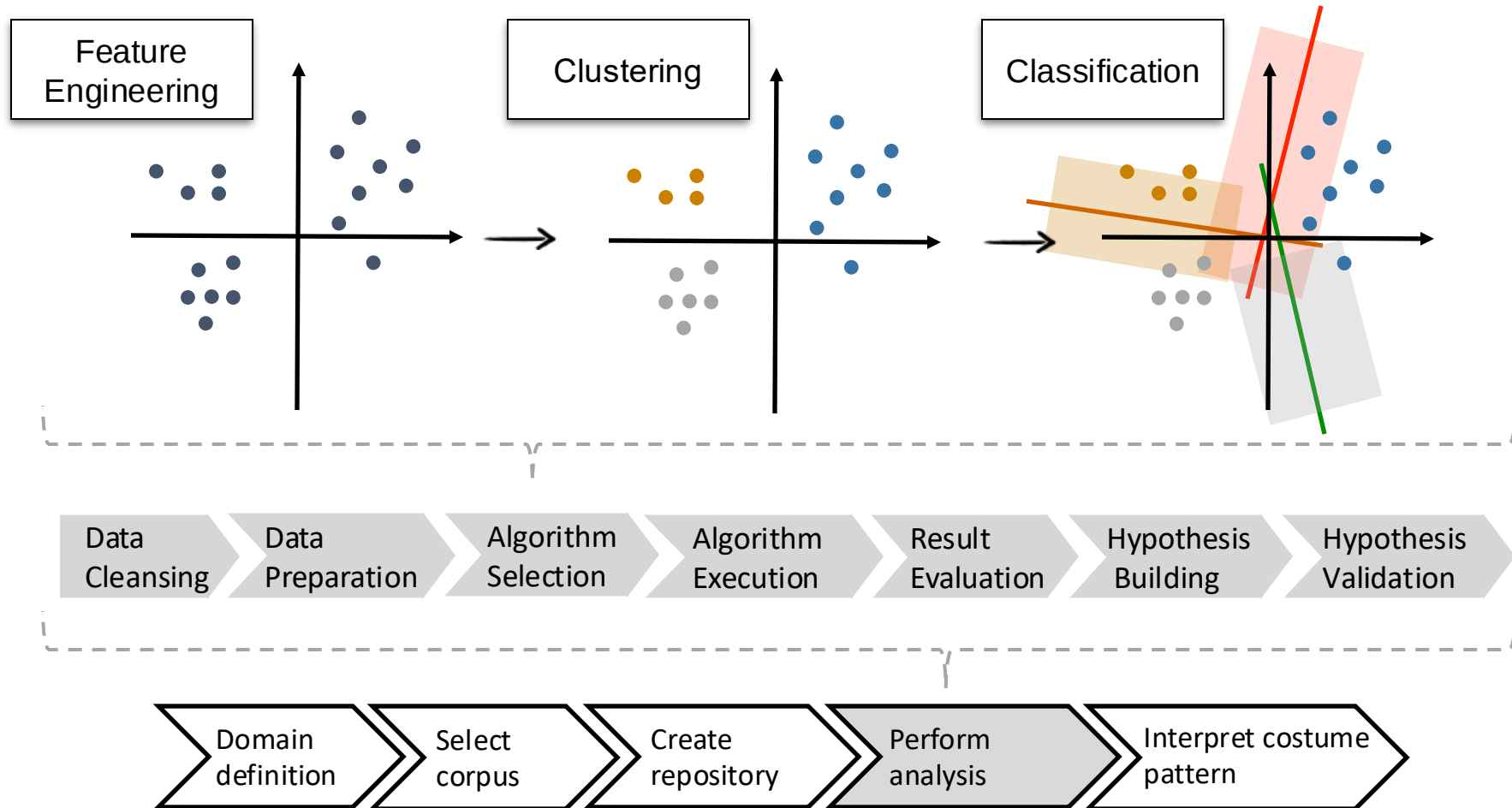
Status from Base Elements

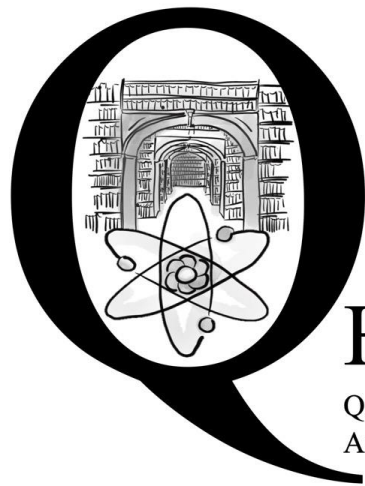
abgetragen alt

Including:

- **5,399** Costumes
- **30,259** Base elements
- **66,768** Primitives
- **166,447** Color selection
- **187,706** Material selection

MUSE-Analysis Process





HAna

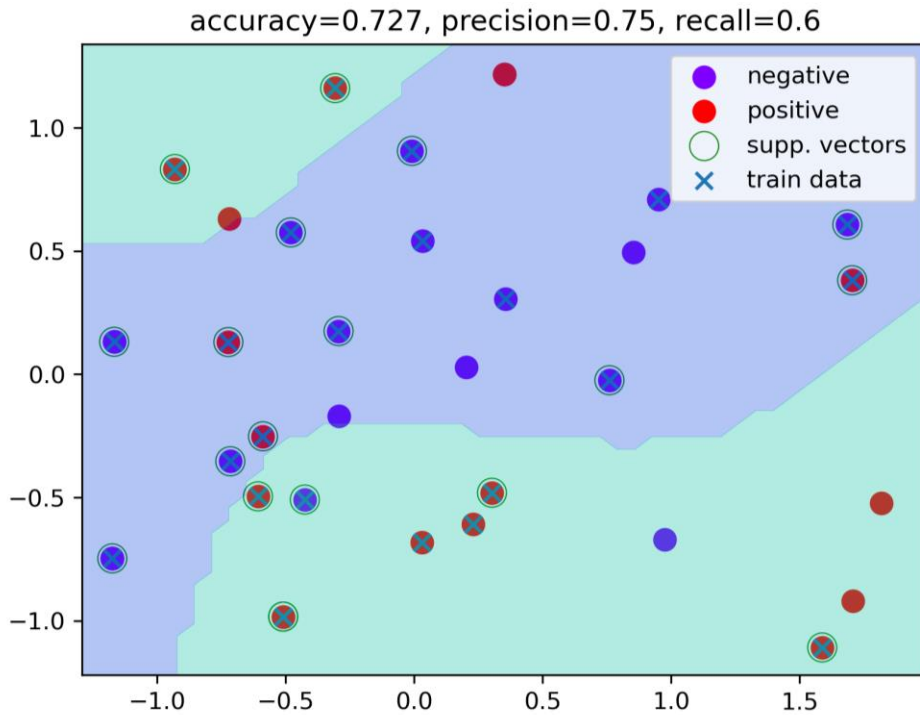
Quantum Humanities
Analysis Tool

A tool for comparing classical
and quantum machine learning

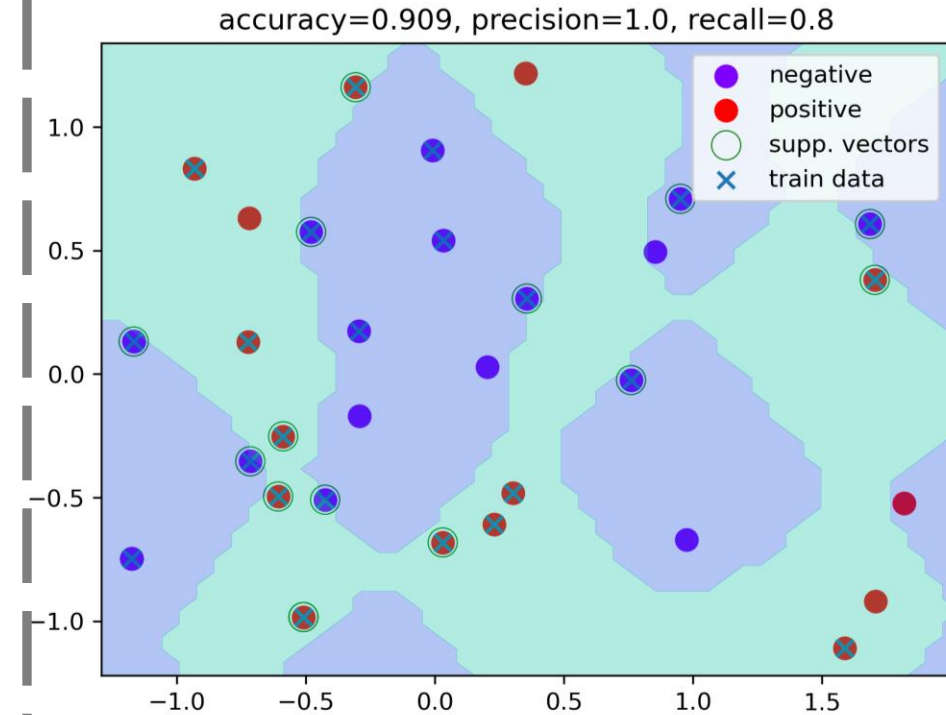


Digital Gipfel 2019
IBM QC, 53 Qubits

Results of Classifiers (QHana)



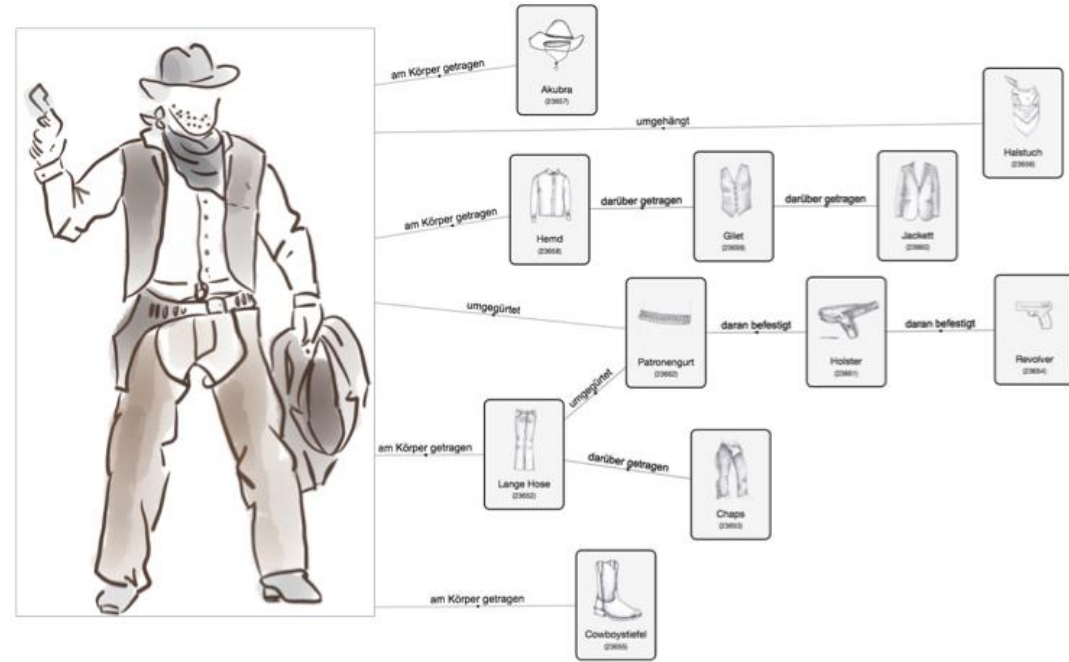
Classification result with classical SVM
(Radial Basis Function (RBF) Kernel)



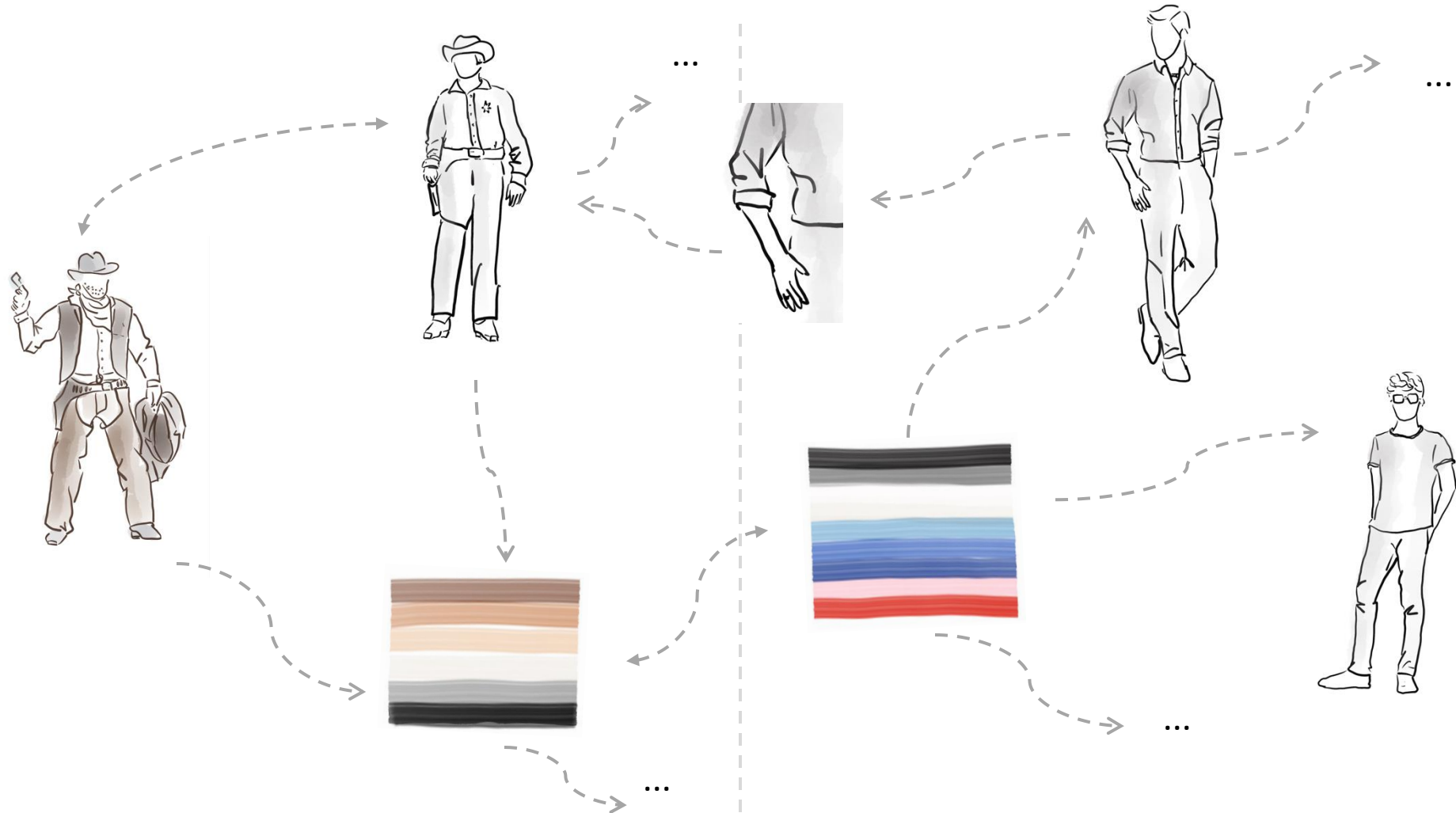
Classification result with quantum SVM
(Quantum Kernel Estimation (QKE))

Costume Pattern

- Name : Male Outlaw
- Icon
- Problem
- Context
- Solution
- Known uses
- References

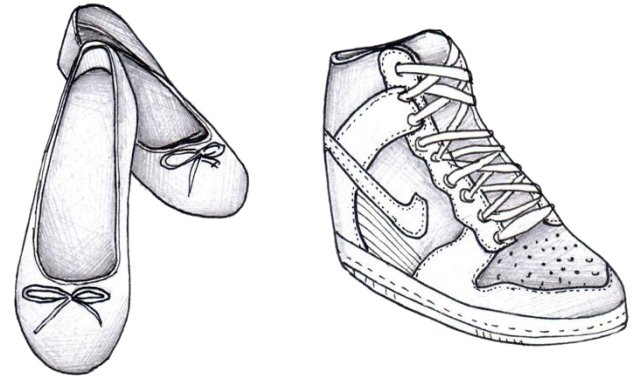


Result: Costume Pattern Language



Western High School Comedys

Summary



Summary

- clothes make (nonverbal) statements
 - fashion makes modernization visible
 - the key tasks in films is characterization and positioning
 - costumes are complex instruments of construction and manipulation
- MUSE
 - new methodology to analyze vestimentary communication
 - finding a (semi) formal language for costumes
 - improve investigation and design of costumes

“If clothes make the man,
then certainly the costume
designer makes the actor!”

Audrey Hepburn

1986, Academy Awards Ceremony



Universität Stuttgart

Thank you!

Dr. Johanna Barzen

E-Mail Johanna.Barzen@iaas.uni-stuttgart.de

Telefon +49 (0) 711 685- 88487

Fax +49 (0) 711 685- 88472

Universität Stuttgart

Institut für Architektur von Anwendungssystemen

Universitätsstraße 38, 70569 Stuttgart