A MILLION PICTURES: MAGIC LANTERN SLIDE HERITAGE AS ARTEFACTS IN THE COMMON EUROPEAN HISTORY OF LEARNING (EURO-MAGIC)

http://a-million-pictures.wp.hum.uu.nl

INTERNATIONAL CONFERENCE

A MILLION PICTURES: HISTORY, ARCHIVING, AND CREATIVE RE-USE OF EDUCATIONAL MAGIC LANTERN SLIDES
UTRECHT, 29 AUGUST - 1 SEPTEMBER, 2017

RESEARCHING AND PRESERVING MAGIC LANTERN SLIDE HERITAGE:
ACTIONS AROUND THE COLLECTION
OF MUSEU DEL CINEMA - COL·LECCIÓ TOMÀS MALLOL

VOCABULARY FROM MAGIC LANTERN SLIDES TO LINTERNAUTA APPLICATION

CARMEN LÓPEZ
FRANCISCO JAVIER FRUTOS

Universidad de Salamanca
Utrecht, 30 August 2017

observatorio contenidos audiovisuales

VNiVERSiDAD D SALAMANCA
CAMPUS OF INTERNATIONAL EXCELLENCE

INTRODUCTION

The research team from the University of Salamanca has contributed with two results of special relevance to the project *A Million Pictures:*

- 1) The classification of magic lantern slides according to their **DISCURSIVE GENRE**
- 2) Using this vocabulary Salamanca team have developed **LINTERNAUTA APPLICATION**

DISCURSIVE GENRE
(IN THE CONTEXT OF THE MAGIC LANTERN)

The discursive genre is a complex concept with social and formal character in between 'Magic Lantern Slide' (evidence) and 'Magic Lantern Show' (reading context)

Magic Lantern Slide
(Evidence)

Magic Lantern Show
(Reading Context)

DISCURSIVE GENDER
Built
(Perform – Inspire - Inform)

THEORETICAL DEFINITION OF DISCURSIVE GENRE
(IN THE CONTEXT OF THE MAGIC LANTERN)

The assembly of relevant variables associated with the production, exhibition and reception conditions of graphically registered contents in magic lantern slides

1) The graphic PRODUCTION conditions set are composed by variables associated with the **'format'**, the 'graphic record' and 'graphic coding'	2) The scenic public EXHIBITION conditions set are composed by variables associated with 'commercial orientation of the device', 'social context' and 'scenic complexity'	3) The RECEPTION conditions of cultural contents set are composed by variables that connect the discursive genre of magic lantern slides with the great cultural traditions to transmit content: visual, musical, literary and scientific

CODEBOOK

OPERATIONAL DEFINITION DISCURSIVE GENRE

(IN THE CONTEXT OF THE MAGIC LANTERN)

DISCURSIVE GENRE
The assembly of relevant variables associated with the production, exhibition and reception conditions of graphically registered contents in magic lantern slides (124 variables)

- **GRAPHIC PRODUCTION CONDITIONS** (9 variables)
  - FORMAT (7 variables)
  - GRAPHIC RECORD (1 variable)
  - GRAPHIC CODING (1 variable)
- **SCENIC PUBLIC EXHIBITION CONDITIONS** (3 variables)
  - COMMERCIAL ORIENTATION OF THE DEVICE (1 variable)
  - SOCIAL CONTEXT (1 variable)
  - SCENIC COMPLEXITY (1 variable)
- **RECEPTION CONDITIONS OF CULTURAL CONTENTS** (112 variables)
  - VISUAL TRADITION (17 variables)
  - MUSICAL TRADITION (4 variables)
  - LITERARY TRADITION (39 variables)
  - SCIENTIFIC TRADITION (52 variables)

Partial codebook presented in 2º workshop (Girona) as an example to explain the process of content analysis

CODEBOOK

OPERATIONAL DEFINITION DISCURSIVE GENRE

(IN THE CONTEXT OF THE MAGIC LANTERN)

DISCURSIVE GENRE

GRAPHIC PRODUCTION CONDITIONS (9 variables)

FORMAT
(7 variables)

STRUCTURAL DEPENDENCE
0 = Clearly unidentifiable; 1 = Independent; 2 = Dependent

STRUCTURAL MOBILITY
0 = Clearly unidentifiable; 1 = Fixe; 2 = Movile

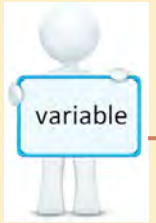
MOVEMENT AXIS
0 = Clearly unidentifiable; 1 = Horizontal; 2 = Vertical; 3 = Longitudinal; 4 = Central; 5 = Noncentral; 6 = Mixed

MOVEMENT METHOD
0 = Clearly unidentifiable;; 1 = Sliding; 2 = Shutter; 3 = Blinds; 4 = Pulley ; 5 = Zip; 6 = Mixed

TIME-SPACE TREATMENT
0 = Clearly unidentifiable; 1 = Elliptical; 2 = Unabridged

MATERIAL NAME CONFIGURATION
0 = Clearly unidentifiable; 1 = Exempt; 2 = Mounted

MORPHOLOGICAL CONFIGURATION
0 = Clearly unidentifiable; 1 = Simple; 2 = Complex



CODE

Category

GRAPHIC RECORD
(1 variable)
REGISTRATION

0 = Clearly unidentifiable

1 = Pictorical record techniques

2 = Stamping recording techniques

3 = Photographic techniques

4 = Mixed techniques

GRAPHIC CODING
(1 variable)
CODING

0 = Clearly unidentifiable

1 = Low-Scenic

2 = Low-Photography

3 = Low-Pictorial

4 = Low-Stamping

5 = Medium-Not naturalistic

6 = Medium-Sketch

7 = Medium-Pictogram

8 = High-Idea

9 = High-Ideogram

10 = High-Abstract

CODEBOOK

OPERATIONAL DEFINITION DISCURSIVE GENRE

(IN THE CONTEXT OF THE MAGIC LANTERN)

DISCURSIVE GENRE

ESCENIC EXHIBITION CONDITIONS (3 variables)

COMMERCIAL ORIENTATION OF THE DEVICE

(1 variable)

COMMERCIAL ORIENTATION DEVICE

0 = Clearly unidentifiable
1 = Professional
2 = Amateur

SOCIAL CONTEXT

(1 variable)

SOCIAL CONTEXT

0 = Clearly unidentifiable
1 = Public
2 = Private

SCENIC COMPLEXITY

(1 variable)

SCENIC COMPLEXITY

0 = Clearly unidentifiable
1 = Low
2 = Medium
3 = High

CODEBOOK

OPERATIONAL DEFINITION DISCURSIVE GENRE

(IN THE CONTEXT OF THE MAGIC LANTERN)

DISCURSIVE GENRE

RECEPTION CONDITIONS OF CULTURAL CONTENTS (112 variables)

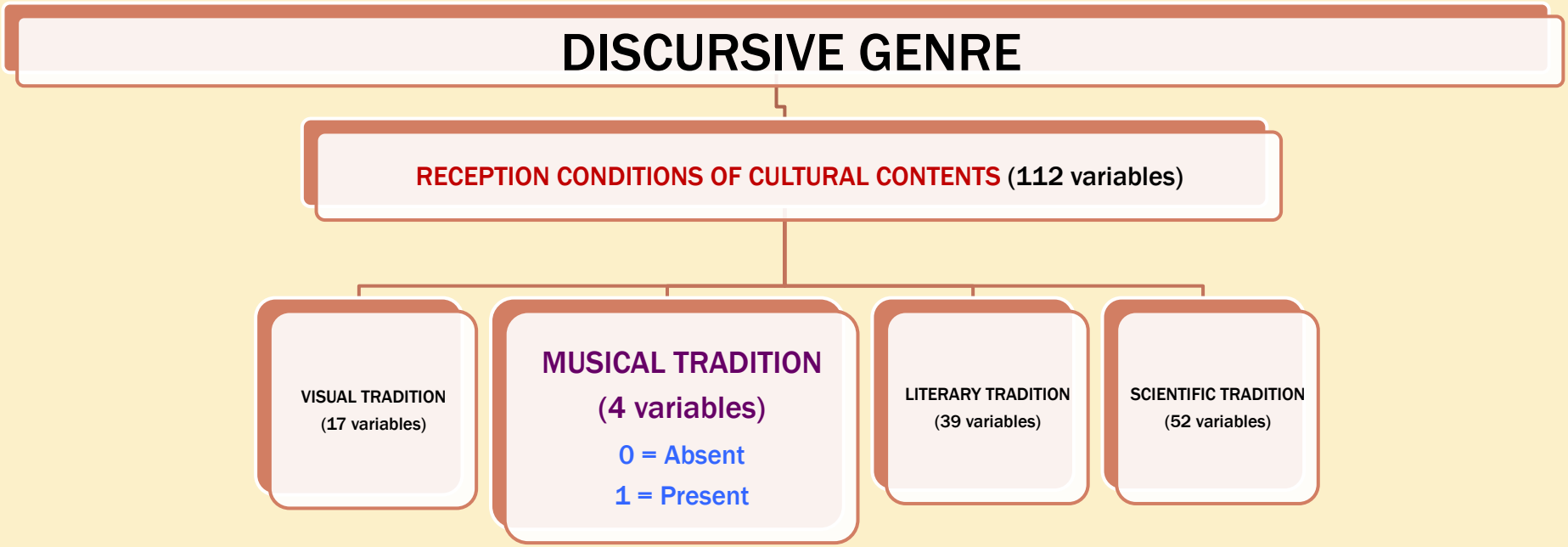
- **VISUAL TRADITION** (17 variables) 0 = Absent 1 = Present
- **MUSICAL TRADITION** (4 variables)
- **LITERARY TRADITION** (39 variables)
- **SCIENTIFIC TRADITION** (52 variables)

4.1. VISUAL TRADITION			
4.1.1. Pictoric			
4.1.1.1. Portrait (TC-V01)	4.1.1.2. Naked (TC-V02)	4.1.1.3. Still Life (TC-V03)	4.1.1.4 Landscape (TC-V04)
4.1.1.5. Religious Painting (TC-V05)	4.1.1.6. Mythological Painting (TC-V06)	4.1.1.7. Allegorical Painting (TC-V07)	4.1.1.8. Historical Painting (TC-V08)
4.1.2. Graphic			
4.1.2.1. Illustration (TC-V09)	4.1.2.2. Comic Strip (TC-V10)	4.1.2.3.Comic (TC-V11)	
4.1.3. Optical			
4.1.3.1. Photography (TC-V12)	4.1.3.2. Stereoscope (TC-V13)	4.1.3.3. Stroboscope (TC-V14)	4.1.3.4. Panorama (TC-V15)
4.1.3.5. Diorama (TC-V16)	4.1.3.6. Kaleidoscope (TC-V17)		

CODEBOOK

OPERATIONAL DEFINITION DISCURSIVE GENRE

(IN THE CONTEXT OF THE MAGIC LANTERN)



4.2. MUSICAL TRADITION			
4.2.1. Classical (TC-M01)	4.2.2. Traditional - Folklore (TC-M02)	4.2.3. Religious (TC-M03)	4.2.4. Varieties (TC-M04)

CODEBOOK

OPERATIONAL DEFINITION DISCURSIVE GENRE

(IN THE CONTEXT OF THE MAGIC LANTERN)

DISCURSIVE GENRE

RECEPTION CONDITIONS OF CULTURAL CONTENTS (112 variables)

- **VISUAL TRADITION** (17 variables)
- **MUSICAL TRADITION** (4 variables)
- **LITERARY TRADITION** (39 variables)
  - 0 = Absent
  - 1 = Present
- **SCIENTIFIC TRADITION** (52 variables)

4.3. LITERARY TRADITION			
4.3.1. Lyric			
4.3.1.1. Song (TC-L01)	4.3.1.2. Hymn (TC-L02)	4.3.1.3. Elegy (TC-L03)	4.3.1.4. Eclogue ((TC-L04)
4.3.1.5. Satire (TC-L05)			
4.3.2. Major Dramatic			
4.3.2.1. Tragedy (TC-L06)	4.3.2.2. Comedy (TC-L07)	4.3.2.3. Tragicomedy (TC-L08)	4.3.2.4. Melodrama (TC-L09)
4.3.2.5. Farce (TC-L10)	4.3.2.6. Didactic work (TC-L11)	4.3.2.7. Realistic Piece (Play) (TC-L12)	
4.3.3. Minor Dramatic			
4.3.3.1. Dance (TC-L13)	4.3.3.2. Shadows and Silhouettes (TC-L14)	4.3.3.3. Illusionism (TC-L15)	4.3.3.4. Declamaction (TC-L16)
4.3.3.5. Imitation (TC-L17)	4.3.3.6. Humor (TC-L18)	4.3.3.7. Pantomime (TC-L19)	4.3.3.8. Acrobatics (TC-L20)
4.3.3.9. Jugglery (TC-L21)	4.3.3.10. Shows of Rarities (TC-L22)	4.3.3.11. Shows of Trained animals (TC-L23)	
4.3.4. Narrative			
4.3.4.1. Epistle (TC-L24)	4.3.4.2. Sermon (TC-L25)	4.3.4.3. Parable (TC-L26)	4.3.4.4. Fable (TC-L27)
4.3.4.5. Story (TC-L28)	4.3.4.6. Costumbrist Novel (TC-L29)	4.3.4.7. Romance Novel (TC-L30)	4.3.4.8. Historical Novel (TC-L31)
4.3.4.9. Gothic Novel (TC-L32)	4.3.4.10. Adventure Novel (TC-L33)	4.3.4.11. Society Column (TC-L34)	4.3.4.12. Events Column (TC-L35)
4.3.4.13. Travel Column (TC-L36)	4.3.4.14. Sports Column (TC-L37)	4.2.4.15. Sign (TC-L38)	4.2.4.16. Advertising (TC-L39)

CODEBOOK

OPERATIONAL DEFINITION DISCURSIVE GENRE

(IN THE CONTEXT OF THE MAGIC LANTERN)

DISCURSIVE GENRE

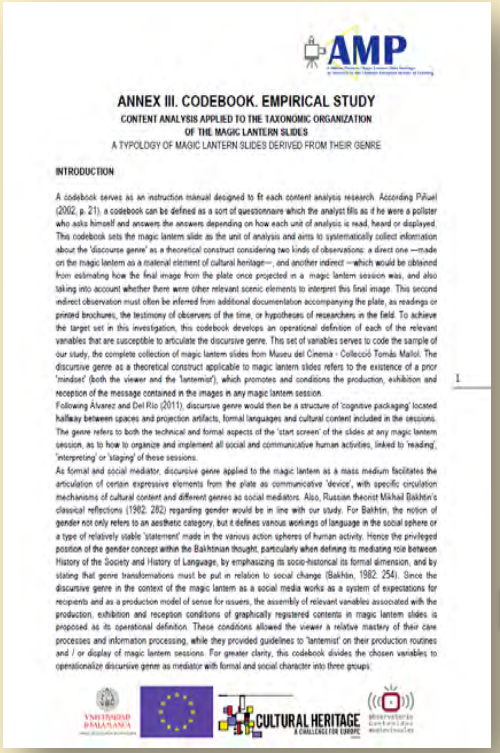
RECEPTION CONDITIONS OF CULTURAL CONTENTS (112 variables)

- **VISUAL TRADITION** (17 variables)
- **MUSICAL TRADITION** (4 variables)
- **LITERARY TRADITION** (39 variables)
- **SCIENTIFIC TRADITION** (52 variables)
  - 0 = Absent
  - 1 = Present

4.4. SCIENTIFIC TRADITION			
4.4.1. Natural sciences			
4.4.1.1. Astronomy (TC-C01)	4.4.1.2. Bacteriology (TC-C02)	4.4.1.3. Biochemistry (TC-C03)	4.4.1.4. Biology (TC-C04)
4.4.1.5. Botany (TC-C05)	4.4.1.6. Chemistry (TC-C06)	4.4.1.7. Entomology (TC-C07)	4.4.1.8. Geology (TC-C08)
4.4.1.9. Geophysics (TC-C09)	4.4.1.10. Mathematics (TC-C10)	4.4.1.11. Meteorology (TC-C11)	4.4.1.12. Mineralogy (TC-C12)
4.4.1.13. Physical Geography (TC-C13)	4.4.1.14. Physics (TC-C14)	4.4.1.15. Zoology (TC-C15)	
4.4.2. Engineering and Technology			
4.4.2.1. Military Engineering (TC-C16)	4.4.2.2. Mechanical Engineering (TC-C17)	4.4.2.3. Forest Engineering (TC-C18)	4.4.2.4. Geodesy (TC-C19)
4.4.2.5. Industrial Chemistry (TC-C20)	4.4.2.6. Architecture (TC-C21)	4.4.2.7. Science and Food Technology (TC-C22)	4.4.2.8. Civil Engineering (TC-C23)
4.4.3. Health Sciences			
4.4.3.1. Anatomy (TC-C024)	4.4.3.2. Medicine (TC-C25)	4.4.3.3. Pharmacy (TC-C26)	4.4.3.4. Public Health (TC-C27)
4.4.4. Agricultural Sciences			
4.4.4.1. Agronomy (TC-C28)	4.4.4.2. Zootechnics (TC-C29)	4.4.4.3. Fishing (TC-C30)	4.4.4.4. Forestry (TC-C31)
4.4.4.5. Horticulture (TC-C32)	4.4.4.6. Veterinary (TC-C33)		
4.4.5. Social Sciences			
4.4.5.1. Anthropology (TC-C34)	4.4.5.2. Ethnology (TC-C35)	4.4.5.3. Demography (TC-C36)	4.4.5.4. Economy (TC-C37)
4.4.5.5. Education and Teaching (TC-C38)	4.4.5.6. Geography (TC-C39)	4.4.5.7. Law (TC-C40)	4.4.5.8. Linguistics (TC-C41)
4.4.5.9. Political Sciences (TC-C42)	4.4.5.10. Psychology (TC-C43)	4.4.5.11. Sociology (TC-C44)	
4.4.6. Humanities			
4.4.6.1. Fine Arts (TC-C45)	4.4.6.2. Languages and Ancient and Modern Literature (TC-C46)	4.4.6.3. Philosophy (TC-C47)	4.4.6.4. Prehistory and History (TC-C48)
4.4.6.5. Archeology (TC-C49)	4.4.6.6. Numismatics (TC-C50)	4.4.6.7. Paleography (TC-C51)	4.4.6.8. Religion (TC-C52)

CONTENT ANALYSIS AS A SCIENTIFIC METHOD TO ORGANIZE MAGIC LANTERN SLIDES

CODEBOOK



AMP

ANNEX III. CODEBOOK. EMPIRICAL STUDY

CONTENT ANALYSIS APPLIED TO THE TAXONOMIC ORGANIZATION OF THE MAGIC LANTERN SLIDES

A TYPOLOGY OF MAGIC LANTERN SLIDES DERIVED FROM THEIR GENRE

INTRODUCTION

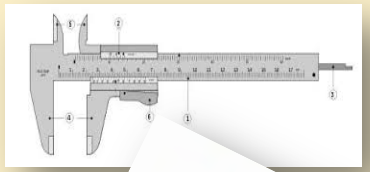
A codebook serves as an instruction manual designed to fit each content analysis research. According Piñuel (2002, p. 21), a codebook can be defined as a sort of questionnaire which the analyst fills as if he were a pollster who asks himself and answers the answers depending on how each unit of analysis is read, heard or displayed. This codebook sets the magic lantern slide as the unit of analysis and aims to systematically collect information about the 'discourse genre' as a theoretical construct considering two kinds of observations: a direct one —made on the magic lantern as a material element of cultural heritage—, and another indirect —which would be obtained from estimating how the final image from the plate once projected in a magic lantern session was, and also taking into account whether there were other relevant scenic elements to interpret this final image. This second indirect observation must often be inferred from additional documentation accompanying the plate, as readings or printed brochures, the testimony of observers of the time, or hypotheses of researchers in the field. To achieve the target set in this investigation, this codebook develops an operational definition of each of the relevant variables that are susceptible to articulate the discursive genre. This set of variables serves to code the sample of our study, the complete collection of magic lantern slides from Museu del Cinema - Collecció Tomás Mallol. The discursive genre as a theoretical construct applicable to magic lantern slides refers to the existence of a prior 'mindset' (both the viewer and the 'lanternist'), which promotes and conditions the production, exhibition and reception of the message contained in the images in any magic lantern session.

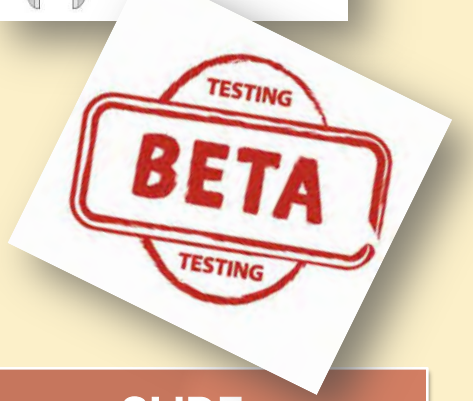
Following Álvarez and Del Río (2011), discursive genre would then be a structure of 'cognitive packaging' located halfway between spaces and projection artifacts, formal languages and cultural content included in the sessions. The genre refers to both the technical and formal aspects of the 'start screen' of the slides at any magic lantern session, as to how to organize and implement all social and communicative human activities, linked to 'reading', 'interpreting' or 'staging' of these sessions.

As formal and social mediator, discursive genre applied to the magic lantern as a mass medium facilitates the articulation of certain expressive elements from the plate as communicative 'device', with specific circulation mechanisms of cultural content and different genres as social mediators. Also, Russian theorist Mikhail Bakhtin's classical reflections (1982: 282) regarding gender would be in line with our study. For Bakhtin, the notion of gender not only refers to an aesthetic category, but it defines various workings of language in the social sphere or a type of relatively stable 'statement' made in the various action spheres of human activity. Hence the privileged position of the gender concept within the Bakhtinian thought, particularly when defining its mediating role between History of the Society and History of Language, by emphasizing its socio-historical its formal dimension, and by stating that genre transformations must be put in relation to social change (Bakhtin, 1982: 254). Since the discursive genre in the context of the magic lantern as a social media works as a system of expectations for recipients and as a production model of sense for issuers, the assembly of relevant variables associated with the production, exhibition and reception conditions of graphically registered contents in magic lantern slides is proposed as its operational definition. These conditions allowed the viewer a relative mastery of their care processes and information processing, while they provided guidelines to 'lanternist' on their production routines and / or display of magic lantern sessions. For greater clarity, this codebook divides the chosen variables to operationalize discursive genre as mediator with formal and social character into three groups:

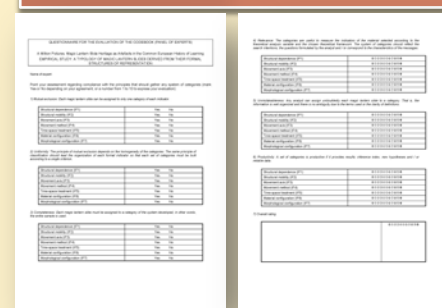
CULTURAL HERITAGE

VALIDITY CODEBOOK

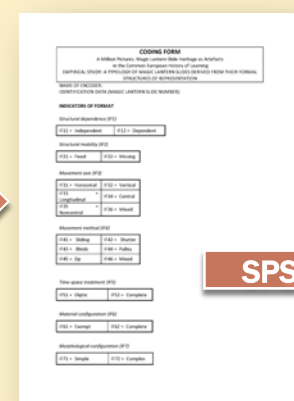


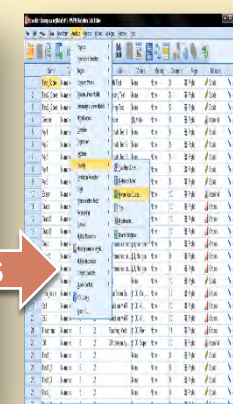


QUESTIONNAIRE: PANEL OF EXPERTS



CODING FORM (STATISTICAL PROGRAMME: SPSS)





SPSS

SLIDE

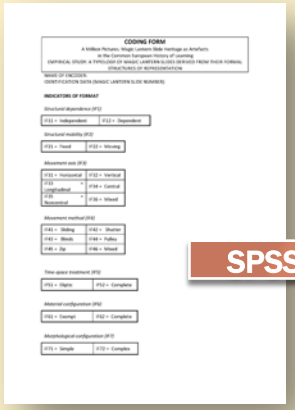
coding

DATA PROCESSING WITH SPSS
HIERARCHICAL CLUSTER ANALYSIS

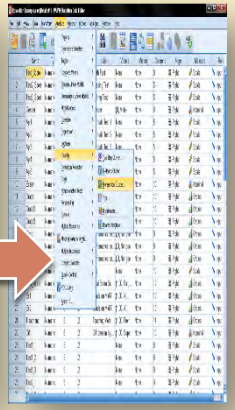
SLIDE

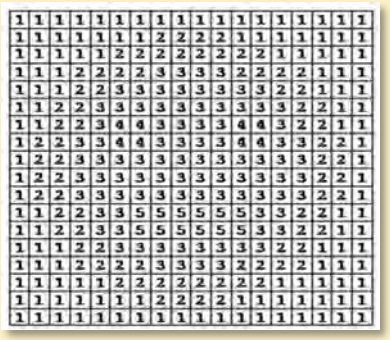
coding

CODING FORM
(STATISTICAL PROGRAMME: SPSS)



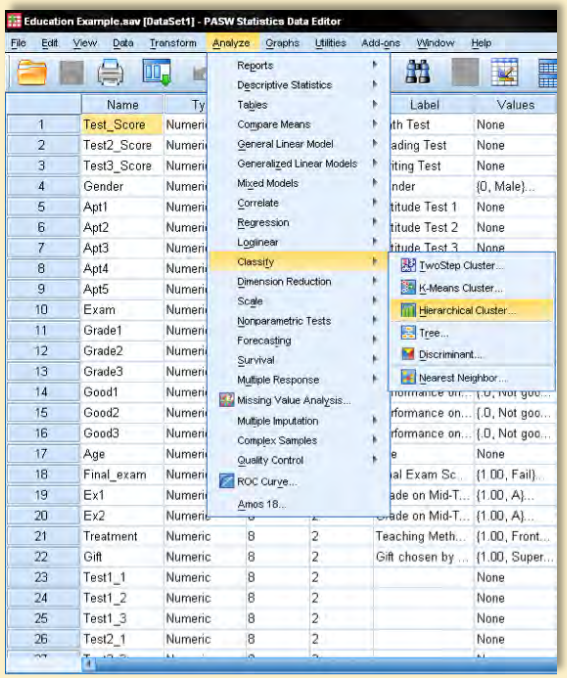
SPSS





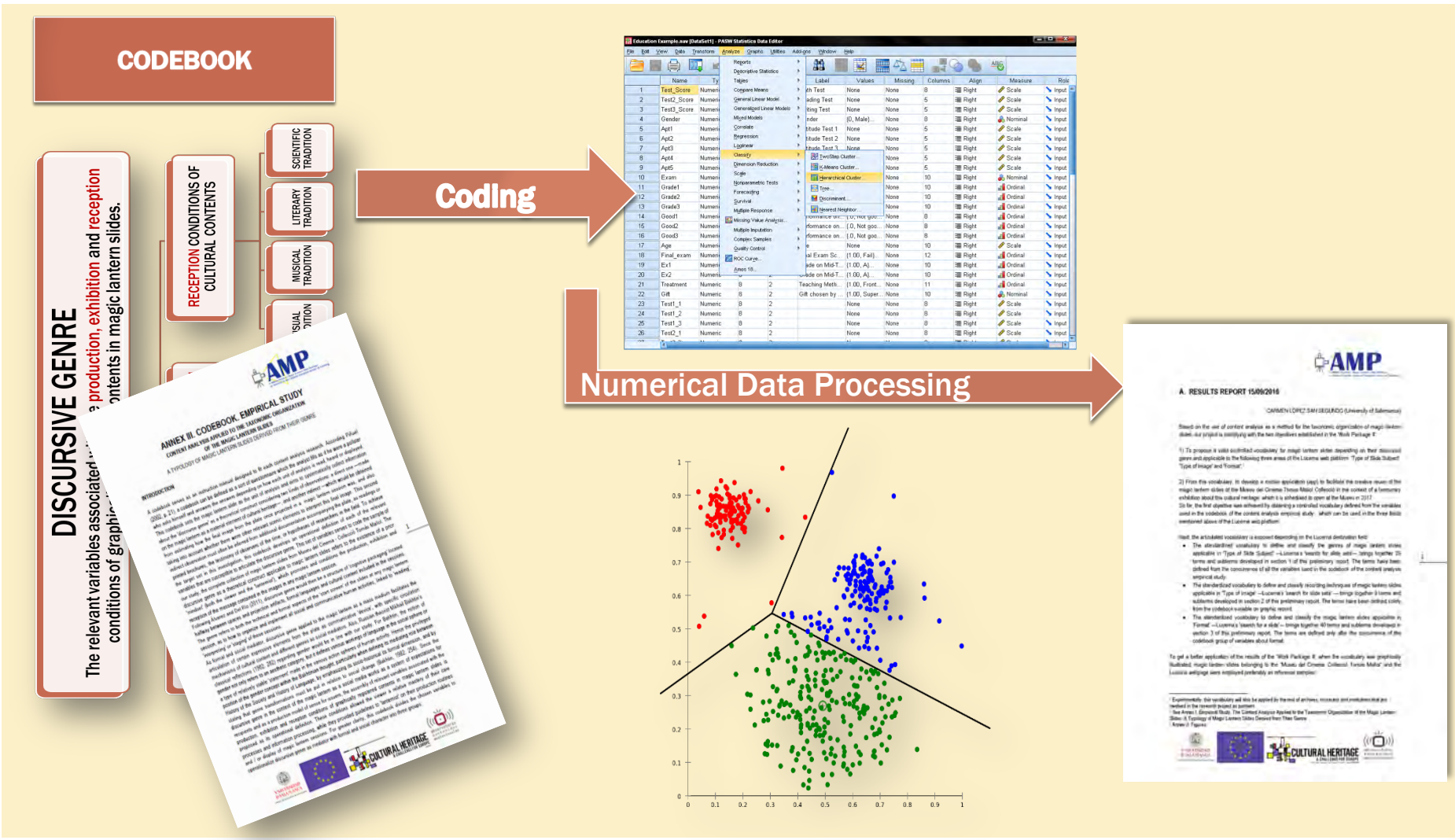
Numerical data: 2609 magic lantern slides (Tomás Mallol Collection) x 124 codes (1 code x variable) x 2 encoders

DATA PROCESSING WITH SPSS
HIERARCHICAL CLUSTER ANALYSIS



- Hierarchical cluster analysis is a statistical method for clustering our cases
- It serves to identify homogeneous groups of cases based on selected variables of characters nominal and ordinal

NUMERICAL DATA PROCESSING
HIERARCHICAL CLUSTER ANALYSIS



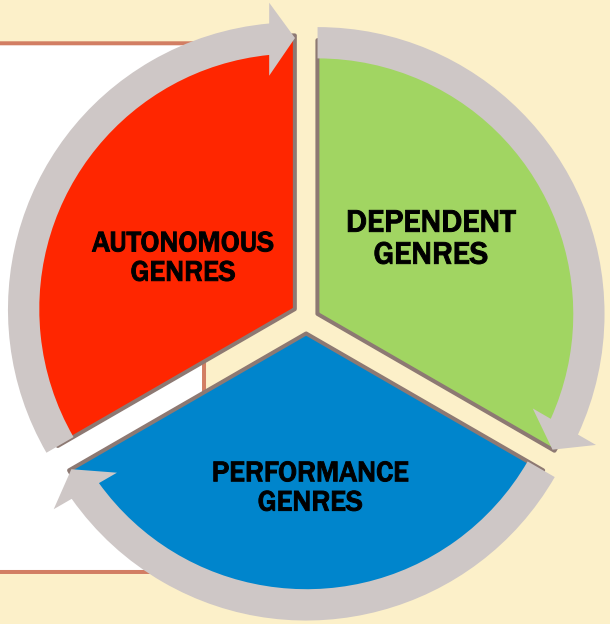
RESULTS

THE STANDARDIZED VOCABULARY FOR MAGIC LANTERN SLIDES

DISCURSIVE GENRES

Three main types of macro-genres and 24 genres:

- Autonomous genres
- Dependent genres
- Performance genres



DISCURSIVE GENRES OF MAGIC LANTERN SLIDES

AUTONOMOUS MACROGENRE

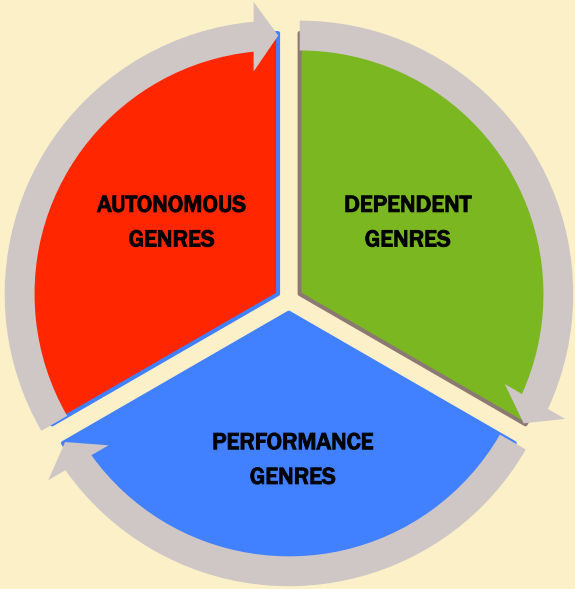
1. Sequential art genre
2. Tale genre
3. Romance genre
4. Adventure genre
5. Everyday genre
6. Phantasmagoria genre
7. Topical genre
8. Title genre
9. Advertising genre

DEPENDENT MACROGENRE

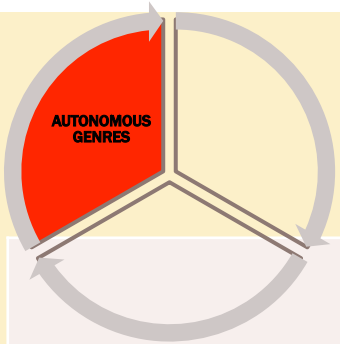
10. Astronomical genre
11. Geographical genre
12. Microscopic genre
13. Zoological genre
14. Botanical genre
15. Technological genre
16. Health genre
17. Agrarian genre
18. Anthropological genre
19. Artistic genre
20. Historical genre
21. Religious genre

PERFORMANCE MACROGENRE

22. Burlesque genre
23. Drama genre
24. Musical genre



DISCURSIVE GENRES OF MAGIC LANTERN SLIDES: AUTONOMOUS MACROGENRES



4.3. LITERARY TRADITION

4.3.4. Narrative
16 critical variables

×

SCENIC COMPLEXITY
1 critical variable

Level of scenic complexity under the conditions of exhibition of the magic lantern slide on the use of other auxiliary sets of formal languages in addition to the graphic and / or linguistic registered on the plate itself.

1 = LOW

There is no documentary evidence that the images of the plate were accompanied and / or required other formal auxiliary languages with sound-musical and / or linguistic character.

=

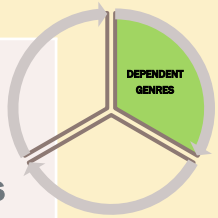
124 RELEVANT VARIABLES
17 CRITICAL VARIABLES

VOCABULARY
AUTONOMOUS GENRES

1. Sequential art genre
2. Tale genre
3. Romance genre
4. Adventure genre
5. Everyday genre
6. Phantasmagoria genre
7. Topical genre
8. Title genre
9. Advertising genre

DISCURSIVE GENRES OF MAGIC LANTERN SLIDES:
DEPENDENT GENRES

4.4. SCIENTIFIC TRADITION
52 critical variables



- 4.4.1. Natural sciences
- 4.4.2. Engineering and Technology
- 4.4.3. Health Sciences
- 4.4.4. Agricultural Sciences
- 4.4.5. Social Sciences
- 4.4.6. Humanities

×

SCENIC COMPLEXITY
1 critical variable
Level of scenic complexity under the conditions of exhibition of the magic lantern slide on the use of other auxiliary sets of formal languages in addition to the graphic and/or linguistic registered on the plate itself.

2 = MEDIUM
There is documentary evidence that the images of the slides were accompanied and/or further elaborated with other formal auxilary languages with linguistic characteristics, as reading printed texts supplied by the manufacturer.

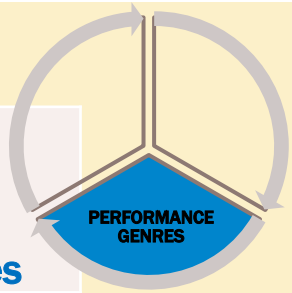
=

124 RELEVANT VARIABLES
53 CRITICAL VARIABLES

VOCABULARY
DEPENDENT GENRES

10. Astronomical genre
11. Geographical genre
12. Microscopic genre
13. Zoological genre
14. Botanical genre
15. Technological genre
16. Health genre
17. Agricultural genre
18. Anthropological genre
19. Artistic genre
20. Historical genre
21. Religious genre

DISCURSIVE GENRES OF MAGIC LANTERN SLIDES:
PERFORMANCE GENRES



4.2. MUSICAL TRADITION

4 critical variables

4.3. LITERARY TRADITION

40 critical variables

- 4.3.1. Lyric
- 4.3.2. Major Dramatic
- 4.3.3. Minor Dramatic

×

SCENIC COMPLEXITY

1 critical variable

Level of scenic complexity under the conditions of exhibition of the magic lantern slide on the use of other auxiliary sets of formal languages in addition to the graphic and/or linguistic registered on the plate itself.

3 = HIGH

There is documentary evidence that the images of the slides were accompanied and / or further elaborated with other formal auxiliary languages with linguistic characteristics, as reading printed texts supplied by the manufacturer, voice and /or sound-musical accompaniment performance

=

124 RELEVANT VARIABLES

45 CRITICAL VARIABLES

VOCABULARY

PERFORMANCE GENRES

22. Burlesque genre
23. Drama genre
24. Musical genre

SOME EXAMPLES OF DISCURSIVE GENRES ANALISING BY MAGIC LANTERN SLIDES

Macrogenre Autonomous Genre Phantasmagoria

Macrogenre Dependent Genre Everyday

Macrogenre Scenic Genre Burlesque

Macrogenre Dependent **Genre** Astronomical

Macrogenre Dependent Genre Topical

Macrogenre Dependent Genre Title

Macrogenre Scenic Genre Musical

Macrogenre Dependent Genre Botanical

LINTERNAUTA APP: APPLYING THE VOCABULARY

1.128 slides from:

- Filmoteca de Catalunya
- Filmoteca Española
- Instituto Histórico Cardenal Cisneros (Madrid)
- Instituto Histórico El Greco (Toledo)
- Instituto Histórico Isabel La Católica (Madrid)
- Instituto Histórico San Isidro (Madrid)
- Museo del Cinema. Col.lecciò Tomás Mallol
- Museo Nacional de la Ciencia y la Tecnología (MUNCYT)

URL: http://linternauta.docenciavirtual.es

Our Partners

LINTERNAUTA: APPLYING THE VOCABULARY

- Designed to promote technological and educational innovation
- Offers online multi-language content
- Thought out to be part of the catalog of educational tools used by museums, temporary exhibition or Institutions related with Magic Lantern or to support them

Una vuelta al mundo de la linterna mágica (A World Tour of the Magic Lantern, **The Space of Scientific Culture, University of Salamanca)**

Llum! La llanterna màgica i la imatge digital. Complicitats entre els segles XIX i XXI **(Museu del Cinema, Universitat de Girona & A Million Pictures)**

THE END

THANK YOU FOR YOUR ATTENTION

(Carmen López) maika@usal.es
(Fco. Javier Frutos) frutos@usal.es

ACKNOWLEDGEMENTS

A Million Pictures: Magic Lantern Slide Heritage as Artefacts in the Common European History of Learning is a Joint Programming Initiative on Cultural Heritage – Heritage Plus project, which is funded by NWO, AHRC, Belspo and MINECO and Co-Funded by the European Commission