
Van editie naar hypereditie:

methoden voor online publicatie van muziekwerken

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KVNM-voorjaarsbijeenkomst Editietechniek
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Missie

- ontwikkelen en bevorderen van de toepassing van computationele methoden in de muzikwetenschap
 - grote hoeveelheden gegevens
 - kwantitatieve uitspraken
 - reproduceerbaar, controleerbaar
 - modellen voor wetenschappelijke samenwerking en communicatie--kennisinfrastructuur

- perspectief van Informatiekunde
 - modelleren van informatie en processen staat voorop

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Probleem

- Wat zijn de implicaties van ICT-ontwikkelingen voor kritische muzikeditie
 - digitale kritische editie is een veelbesproken onderwerp in de literatuurwetenschap, maar niet in de muzikwetenschap
- Doel:
 - presenteren model voor digitale kritische muzikedities
 - discussie stimuleren
 - rapport uit 1997, tijd nog niet rijp?
 - nu wel!
- Waarschuwingen
 - beschreven cases zijn geen concrete projecten (m.u.v. ECOLM)
 - model staat voorop, niet muzikwetenschappelijke inzichten

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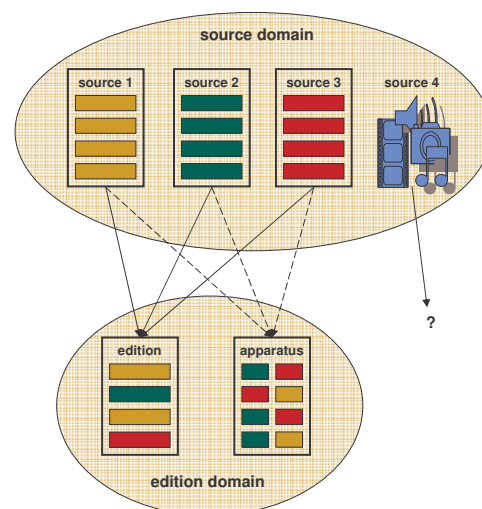
Inhoud

- Teksteditie: electronic textuality
- Kritische en digitale muziekedities
- Multidimensionaal model
- Casus (2-4)
- Dimensies en presentaties
- Evaluatie en conclusies

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Jerome McGann: *The Rationale of Hypertext* (1995)

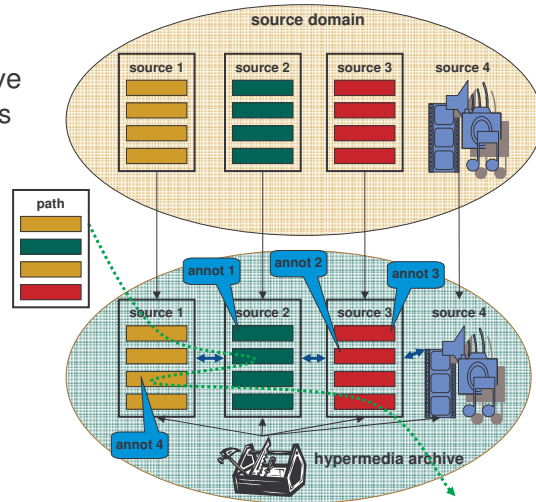
- book as 'Machine of Knowledge'
 - text of edition is 'ideal reconstruction generated from different documents'
 - complex analytical mechanisms (apparatus etc.) shaped by limits of the book
 - reconstruction of primary sources very difficult
 - materials beyond book format inaccessible (performance of play or song; physical features of document)
- traditional critical edition is an account of textual network by means of another text:
 - the logical structures of the 'critical edition' function at the same level as the material being analyzed



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HyperEditing

- fully-networked hypermedia critical archive
 - virtual copies of sources
 - connections
 - analytical tools
 - searching
 - comparing
 - annotations
 - critical and contextual information
- 'traditional' edition = reading path



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Critical editing in musicology

- aim: present well-reasoned text of composition
- traditional approaches (Lachmann et al.)
 - work vs. text problem
 - reason: music as performing art (Brett 1988)
- emphasis on transcription technique (esp. Early music)
 - translation to CMN
 - inference (e.g. musica ficta, text underlay)
 - performance orientation (which is good)
- no fundamental role for information technology
 - (almost) no hyperediting in music
 - output (page, sound) oriented (shapes, positions)
 - music notation software
 - PDF publishing
 - encoding systems
 - function of encoding is to make storage, display and manipulation of score possible
 - information content of encoded scores is not further exploited

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Online edities: voorbeelden

The screenshot shows a web browser window displaying an online musical score for Johannes Ockeghem's 'Deo gratias a 36 voci'. The score is presented in a multi-staff format, with lyrics 'De - - o gra - ti - as' visible under the notes. The interface includes a search bar, navigation buttons, and a sidebar with options like 'Pages', 'Comments', and 'Attachments'. The browser's address bar shows the URL 'http://www.cpd.org'. The page title is 'Johannes Ockeghem - C... Main Page - ChoralWiki'.

Choral Public Domain Library (www.cpd.org)

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Caron editie

The screenshot shows a web browser window displaying an online musical score for 'Accueilly m'a la belle au gent atour' by Firmus Caron. The score is presented in a multi-staff format, with lyrics '1.4.7. Ac - cuez - lly m'a la belle au gent a -' visible under the notes. The interface includes a search bar, navigation buttons, and a sidebar with options like 'Pages', 'Comments', and 'Attachments'. The browser's address bar shows the URL 'http://www.une.edu.au/music/Caron/scores/Accueilly_m%27a_la_belle.p'. The page title is 'Accueilly m'a la belle... Main Page - ChoralWiki'. On the left side, there is a sidebar for 'The Caron Web Site' with a 'Contents' menu listing items like 'Introduction', 'About the Composer', 'Catalogue of Works', 'Sources', 'Caron's Masses', 'Caron's Chansons', 'Related compositions', 'Sound files of works', 'Acknowledgements', 'Bibliography', and 'Links'. The 'Contents' menu also includes 'MISSA GENE' and 'This u... item in... 51 - exam... Source... alpha... transc...'. The browser's address bar also shows 'http://www.une.edu.au/music/Caron/scores/Accueilly_m%27a_la_belle.p'.

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IAML abstract: Mozart

Mozart digitized

The Packard Humanities Institute, in collaboration with the Salzburg Mozarteum is currently undertaking two major digital projects focusing on Mozart. The first one is a long-term project that aims at making the complete works of Mozart available in digital format and in a critical edition that that can be updated as needed. The second one is a facsimile edition...

Christoph Wolff

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Previous work in musicology

- Variants and stemmatics
 - Thomas Hall (New Josquin Edition)
 - Yo Tomita (Bach, WTC II)
- Digital facsimiles and restoration
 - DIAMM
 - Online Chopin Variorum Edition (OCVE)
- Online editions
 - *Corpus mensurabilis musicae electronicum* (CMME)
 - information content: source text
 - generates different transcription styles
 - Electronic Corpus of Lute Music (ECOLM) lute tablature sources
 - adds encoding of textcritical features



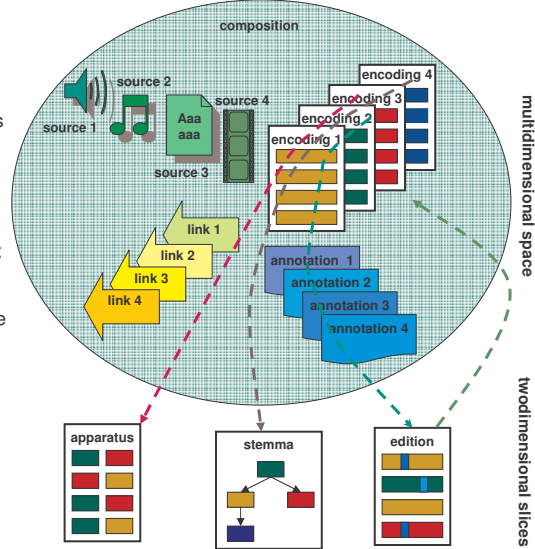
The image displays two systems of musical notation. Each system consists of four staves: a soprano staff (S), a alto staff (A), a tenor staff (T), and a bass staff (B). The notation is mensural, with square notes on a four-line staff. The first system is in C major and the second system is in D minor. The notation includes various rhythmic values and rests.

CMME views of Pierre de la Rue,
Vexilla regis-Passio domini

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A Multidimensional Model for DCEM

- a **hyperlinked** collection of
 - digitised sources
 - any relevant medium
 - encodings
 - information content of sources
 - central position in model
 - annotations
 - textcritical features
 - knowledge
 - link to other works
- views reduce dimensionality, e.g.:
 - apparatus
 - stemma
 - edition: annotated path through the collection
 - may be frozen and added to collection
- issues
 - which dimensions?
 - useful?
- 4 case studies



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Case 1: Anonymous, *Missa Ma bouche rit* (VienNB 11883)

- problem: relation to model (Ockeghem's virelai)
 - consistent differences with editions of model
 - but: such relations occur at source, not edition, level
 - reconstruction of sources through apparatus is hard
 - conclusion: the model may be an unknown variant
 - potentially interesting for reception history
- DCEM contribution
 - easy access to variants
 - add new version
 - relate composition to model

Kyrie b.

Ockeghem, a.

ed. Plamenac

fort qui m'ai - - - de

VARIANT READINGS:

Superius before 111 C2 in sig (BerGlo), 6 in sig (PBN 4379, RISM 1501, RISM 1538^o), 21-2 1 br (RCar 2856), 31-2 1 br (RCG XIII.27), 51-2 c dot sbr, b m (BerGlo), 1 br (RISM 1538^o), 712-811 lig (WLab); 81-2 lig (BerGlo, Munsche, PCord, WLab, RISM 1538^o), 92-101 lig (Csp 1848, PCord, RCas 2856), 101-2 lig (RISM 1538^o), 102-111 lig (PCord); 122-131 1 br (BerGlo, RCas 2856, RISM 1538^o), 132 br ext (BerGlo), 141-2 lig (RCas 2856, RISM 1538^o), 151 sbr m (BerGlo), 161-2 lig (Munsche, PCord, RISM 1538^o), 162 miss ext (WLab 287); 182-191 lig (WLab); 192-201 sbr rest ext (PPris); 222-3 mi col (BerGlo, Csp 1848, FBNC 176, FR 2356, Munsche, NHM, PBN 4379, PPris, RCG XIII.27, WLab, WLab 287), 2 m (RISM 1501); 231 sm ext (NHM); 231-3 miss ext (Munsche), 242-3 no lig (RCas 2856, RISM 1501); 311-322 d m, c ssa, b ssa, a sbr, g m, f m (RISM 1538^o); 313 m ext (Csp 1848); 312-322 bl sbr, bl m, m (RCG XIII.27); 313-322 dot m, ssa, m (RISM 1501); 321-2 1 g m (FBNC 176, FR 2356, PPris); 342-3 dot m, ssa (Dij); 351-2 no mi col (BerGlo, FBNC 176, FR 2356, NHM, PPris, RCas 2856, WLab, RISM 1501, RISM 1538^o), 361 miss ext (PPris); 391-2 bl sbr, bl m (Munsche); 411-2 mi col (BerGlo, Csp 1848, Dij, FBNC 176, FR 2356, Munsche, NHM, PBN 4379, PCord, PPris, RCG XIII.27, WLab, WLab 287); 412 f fu, b fu (RISM 1538^o); before 421 sharp (NHM); 453-452 bl sbr, 2 fu ext (Munsche); 431-2 1 g m (FBNC 176, FR 2356, PPris, RCG XIII.27); 461 sig comp (BerGlo); before 471 C in sig

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Reconstructie model (p. 1)

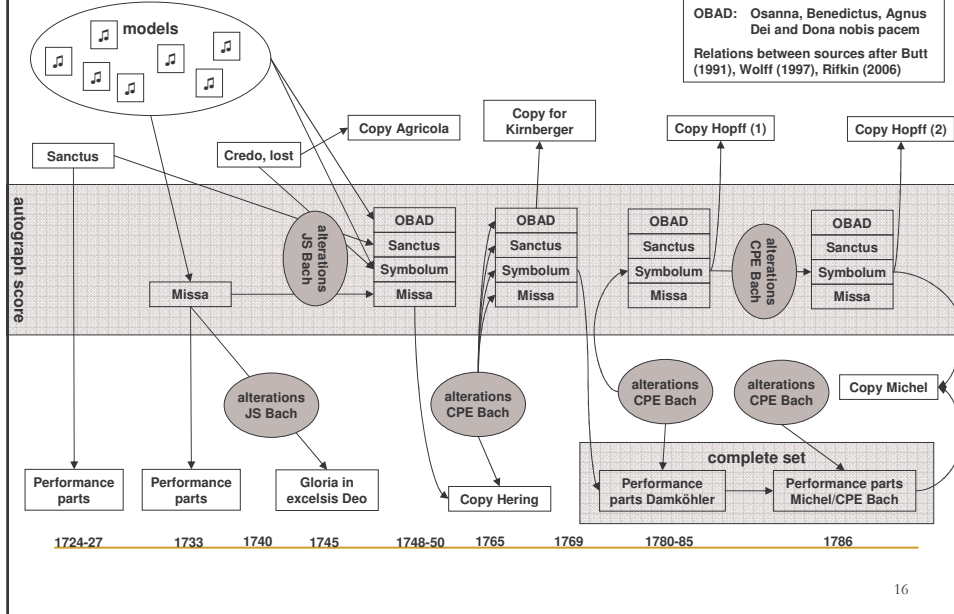
Ma bouche rit

Ed. WeslerPlamenac + Vienna variants

Superius
Tenor
Contratenor

Case 2: J.S. Bach, Mass in B Minor

OBAD: Osanna, Benedictus, Agnus Dei and Dona nobis pacem
Relations between sources after Butt (1991), Wolff (1997), Rifkin (2006)



Zoom in on detail: Domine Deus

P 180

ed. Uwe Wolf

Dresden performance parts (1733)

Kimberger

ed. Smend (NBA)

ed. Christoph Wolff

Flauto traverso I

Flauto traverso II

Violino I

Violino II

Viola

Violoncello

Contrabbasso

Soprano I

Soprano II

Alto

Tenore

Basso

* Der lombardische Rhythmus ist nur hier sowie in Takt 27 generelle Ausführungsanweisung für dieses Motiv.

- Other meaningful views:
 - P 180 as copy text-2 flutes, no figured bass (ed. Rifkin)
 - consistent application of rhythmic pattern, or just to bar 2 (violin 1)
- Performance
 - both notations contribute to understanding (notes inégales, couler)
 - may explain solo performance

Gardiner

Koopman

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Mass in B Minor: discussion

- problem
 - complex network of models, sources and source layers
 - seems more important to give access to multitude of options than to choose a preferred option
 - paper has only unsatisfactory means to do so
- DCEM contribution
 - provide network view of work genesis and transmission
 - zoom in on materials **at required level of granularity**
 - compare different sources
 - check on what grounds editorial decisions were made
 - little duplication of effort

Houdt u van reconstructies?

Reconstructie van Mozart's Grote Mis

Nederlandse première door het Lelikoor in de Nieuwe Kerk Amsterdam

In het kader van het Mozartjaar zal het Amsterdamse Lelikoor op **19 en 20 mei** de nieuwe versie van de Grote Mis in C van Mozart ten gehore brengen. De Amerikaanse Mozart-specialist [Robert D. Levin](#) heeft de ontbrekende delen in de mis gereconstrueerd en het is deze nieuwe, liturgisch complete mis die zijn Nederlandse première beleeft in de passende omgeving van de Nieuwe Kerk in Amsterdam.



Het Lelikoor (foto © Jan van Brada)

Mozart begon met het schrijven van de Grote Mis in 1782. Waarom hij het werk niet voltooid heeft blijft een mysterie. De reconstructie gemaakt door Robert Levin vult de belangrijke leemten op die in de oorspronkelijke partituur aanwezig waren. Pianist/musicoloog Levin is algemeen bekend om zijn verantwoorde reconstructies van werken van Mozart (o.a. het Requiem) en andere componisten. De bewerking van de Grote Mis is gemaakt in opdracht van de Carnegie Hall Corporation, ging in Januari 2005 in Carnegie Hall in première en werd enthousiast ontvangen.

Case 3: Vincenzo Galilei, *Fronimo* (1568)

- Problems
 - alternative versions of one score
 - unornamented: black
 - ornamented: black + red
 - inaccessibility of notation
 - transcription adds information (inference of duration, melody)
 - information loss in transcription (courses and frets)
- DCEM contribution
 - show each version separately
 - show differences
 - different renditions of tablature (Italian, French, CMN, MIDI)
 - different transcription styles (polyphonic, chordal)
- Other pieces involving performance alternatives
 - plainchant psalms
 - Byrd, *Gradualia* (adaptable to liturgy)
 - *Solus tenor* motets
 - Operas (e.g. text-centred edition of Metastasio operas)



duration heard, not played

red note played on different courses

Case 4: Silvius Leopold Weiss, Bourrée

- Problem: compare 4 sources of composition
 - encoding ('TabXML') contains all versions
- DCEM contribution
 - each version can be extracted
 - 3 methods for comparing sources, at different levels
- Representation is crucial component of edition
 - generates concrete visual (audible) presentations



The image displays three staves of music. The top two staves are guitar tablature, with numbers 1-4 indicating fret positions and rhythmic notation above. The bottom staff is a piano transcription of the same piece, showing the treble and bass clefs with standard musical notation.

demo: <http://doc.gold.ac.uk/isms/hometest/tabxmltest.php>

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Weiss: comparing sources

This image compares four manuscript sources of Weiss's Bourrée. On the left, the original notation for each source is shown. On the right, the same notation is overlaid with red vertical bars of varying heights and widths, representing the density of variants in each source. The Paris source has the fewest variants, while the Brno and Harrach sources have significantly more.

rhythmic variants different attempts to render the same *inégal* effect in performance?

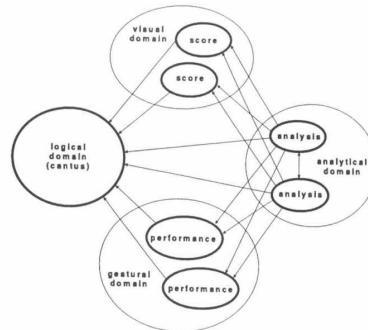
- Apparatus (TabXML)
- Parallel texts
- Density of variants

A piano transcription of the Bourrée, showing the treble and bass clefs with standard musical notation. The piece is in 3/4 time and features a characteristic 'inégal' rhythm.

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Dimensions

- Visual: written sources
 - problems in source text
 - emendation
 - uncertainty
 - source layers
 - correction (Bach)
 - improvement (Bach)
 - alternative (Galilei)
 - explication (Bach)
 - different sources
 - variants (Ockeghem, Weiss)
 - intertextuality (Ockeghem, Bach)
- Logical: edition
 - preference (Bach)
 - adapt to CMN convention
 - transcription (Ockeghem, Galilei, Weiss)
 - inference (Galilei, Weiss)
- Gestural: performance
 - ensemble composition
 - interpretation
 - recording
- Analytical
 - knowledge (Bach)
 - linking (Ockeghem, Bach)



- Classification based on Standard Music Description Language (SMDL) domains
- multidimensional model seems very complex
 - deliberate 'maximum view'
 - use subsets for specific repertoires, related to musical surface
 - modular approach (domains and subdomains)

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Views

- Linear renditions (notation or sound)
 - diplomatic transcription
 - layers in source
 - emended source
 - edition (reading path)
- Composite views
 - aligned sources, editions
 - apparatus
 - stemma, source relationships
 - musical relationships

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Do we want digital critical editions of music?

- Pros
 - data-rich approach
 - makes work context explicit
 - generic vs. specific approaches
 - deals better with different instances of a work
 - prevents information loss
 - direct access to information base (control)
 - personalisation
 - less duplication of work
 - economical: cheap, fast
 - enhancement of accepted musicological methods
- Cons
 - complexity of the model
 - infrastructure: software, data structures
 - editor needs technical expertise
 - web instability
 - reference to dynamic editions
 - intellectual property and rights
 - status of digital publications
 - except the first, these are not specific to music

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Waarom bestaan multidimensionale edities nog niet?

- Techniek
 - complex, maar dat is Finale ook
- Modelmatig denken
 - logisch, formeel
 - model simplificeert realiteit
- Team-aanpak vereist
 - meerdere specialismen
 - musicologie=individualistisch
 - Malcolm Scoble (over biologische taxonomie):
can we do the sociology?

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Final remarks

- aim of DCEM: enhance musicological methods
 - work vs. instance (score, performance)
 - data-rich approach
 - adaptive/personalised presentation
- develop modular approach, iterative development of DCEMs
- how to set debate going?
 - disseminating the idea
 - show how DCEM may interact with other computational approaches
 - analysis, retrieval, performance studies
 - towards an information infrastructure for musicology
 - demonstrate feasibility and validity
 - **important task for KVNM**
 - **publisher *and* scholarly community**
 - **opportunities for both technology and sociology**