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PRESERVATION OF TRADITIONAL MUSIC

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Interactive Multimedia CD-ROMs as a Strategy to Preserve and Spread Traditional Music Culture

by Martina Claus-Bachmann

Following a period of acclimation to new technologies, and a successful trial period, those academic disciplines whose research design and methods are shaped by ethnography generally developed, quite rapidly, an uncomplicated relationship to new media. This was made possible, step by step, by the technological advances of the 20th century. Competence in using new media and technologies guaranteed a scientist the ability to collect material, the analysis of which enabled him to present himself in his vocational identity and to be finally noticed by others. Due to the linearity of history and the fact that media emerge gradually in the history of research, shaped by economic defaults and conditions of production more than by functional usefulness, a certain hierarchy emerged - a media canon, meaning that certain media became more greatly acknowledged and more widespread than others. Nevertheless a clear separation is evident between **three categories of media employed by the ethnographic disciplines:**

- the first for the **recording** of the material,
- the second for the **preservation** of the material, and
- the third for the **dissemination.**

The researcher is caught up in a circularity: He depends on media to present himself as a scientist, yet the development and canonization of the media determine his research-design. For most, this circularity seems to create few problems, except those of the acquisition and improvement of competence. There is a clear, specific purpose for the use of media: The media clearly have an auxiliary function; they are never end in themselves. However, the situation is different for those devoted to **dissemination**. They must care about

- **pedagogical considerations,** the selection concerning contents, and
- **didactic considerations,** the selection concerning methods.

Here the media come so much to the fore that they become a topic of research themselves, in a discipline called the pedagogy of media. Here, the responsible handling of media is not a starting point, but a didactic goal to be achieved. This draws attention to the variability of the target groups, for which a media production is prepared. It does not concern the producer per se, but rather those who will use the media product in the future. The many

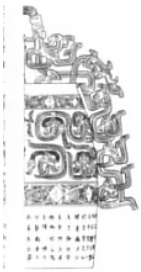
individually- and culturally-shaped possibilities of contact, shaped by both, the represented topic and also the handling of the media, are so different that an extremely complex situation emerges.

To return to the researcher perspective: ethnomusicological research is generally concerned with the supply of limiting markers of cultural systems, or with expressive formations in a context involving sound, which do not yet have a clear cultural assignment. That means, there is always something

- to **hear** (apart from "silence" as research project), usually also something
- to **see**, what in most cases
- is **moving** and

altogether **to describe,**

- **orally narrative** or
- in **written form,**
- perhaps **graphically representable** (pictogram, photo sequences) or
- to **fix in notation** (melody-, rhythm-, dance-).

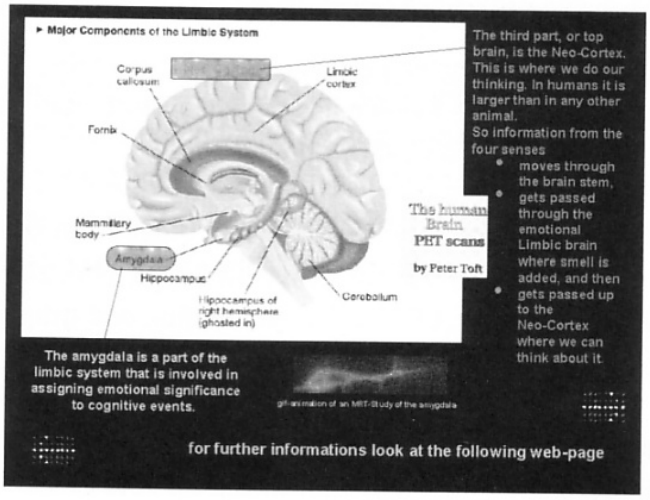


However there can be no objection at all to a print publication in the form of a book or an essay. The most comprehensive volume of ethnomusicological data has been preserved in this way since the beginning, and therefore categorized and structured in certain ways. But no description - even those undertaken in a very careful and precise way or even the most thick descriptions ala Clifford Geertz - can replace either the direct sound impression, or the fascination which is inspired by movements, such as by dance or rituals. Therefore it is not surprising that distributors of printed media, after the development of readily mass-produced audio media, added more and more audio-cassettes and CDs, and later, from time to time, video tapes, despite the fact that publishing houses soon felt overtaxed in their production capacity. More recently, when the application software of author systems became so user friendly, that anyone who could invest the necessary time and energy could use them, CD-ROM production became more and more popular, in addition to and/or in place of print publication.

ROM, meaning Read-Only Memory, refers to a finished conglomerate of media, that do not allow further processing options for the user. This media type now offers the possibility of uniting all recorded components of the supply of limiting markers collected in field research within a single product. Beyond that, it can satisfy at the same time, through its hypermedia possibilities, the needs for interaction and edu-tainment.

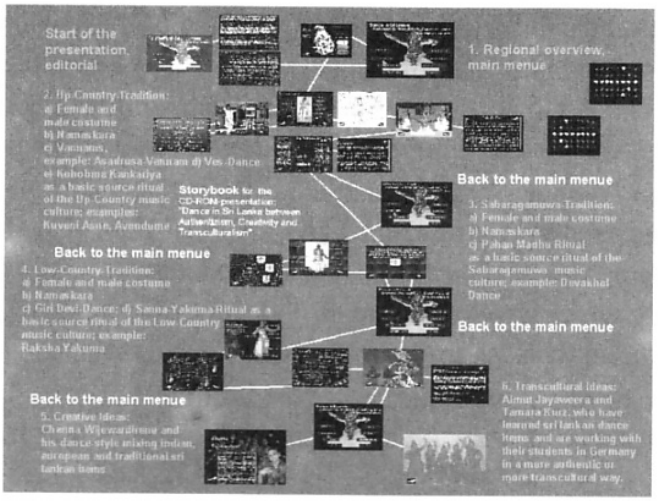
A complex web-adequate circularity develops in opposition to the book, which can present the stored information only in a sequential-linear way. Through the creation of hypertext paths, holistic connections can be produced, which are able to show the systemic structure of cultures and/or the systemic positioning of cultural formations in a more suitable way.

Thus this medium corresponds also more holistically to the full potential of human experience: while the book essentially motivates the reflection ability of humans, located in the cerebral cortex, which developed late phylogenetically, the CD-ROM also activates the older part of the brain with the so-called Amygdala, which seems to represent linkages to feelings during the cognition process and the sensual, mimetic processing of experiences, the possibility of **participating through all senses in the experience process.**



Pic. 1: The brain parts, which participate in the process of cognition

As a user of a prefabricated CD-ROM you have the possibility of acting independently in some ways, as potential paths can be visited exclusively by content as long as you like, or repeated, or not visited at all. As a producer of a presentation you have substantially more comprehensive liberty to organise and arrange the unordered accumulated material of field research. If someone plans a linear arrangement of the content for a book publication first, then a CD-ROM-publication calls for the much more complex task: to create a storybook. This shows in the way of a mindmap not only the content of a single slide, but also the network of connections between all the slides. A single slide consists of diagrams, graphic-, text-, audio- and video-files, all arranged in a user-friendly, clear, topic-appropriate way, using an elegant screen design as well as possible. Important here is not only the **structural shape of the individual slide, but also the linkage between slides.**



Pic.2: The storybook of a CD-ROM-presentation shows the linkages of the single produced slides

Before I deal again with the complex perspective of dissemination - that means with educational-didactical positions - I would like to give a short practical overview of the development and the elements of a CD-ROM-production.

First a certain **hardware** is necessary. The following illustration shows the minimum requirements for the computer equipment with at least 64 MB RAM, 233 MHz CPU, starting from 6 GB harddisk, CD-burner, CD-ROM-drive, audio- and graphic-card, monitor, loudspeakers, keyboard, mouse.

In addition **peripheral components,** which are represented in the second illustration, are necessary, like scanner, printer, further storage media for data exchange, digital camera, discman, walkman, microphone, a video-card and a video-player.

This hardware system must be configured optimally. WIN98 remains the most reliable operating system for multimedia purposes, and this version and all components should be updated with the newest drivers, which are mostly available through the web.

The next step is the **software** configuration. The basis for all text processing is Word2000 with the automatic possibility of producing webpages with hypertext. Furthermore we need an audio editor for the digitization of audio signals (e.g. *Wavelab*), a subsequent processing tool for audio files in form of an audio- or an audio/midi-sequencer (e.g. *Cubase*), picture-processing software (e.g. *Photoshop*) and video-processing software (e.g. *Premiere*).

With this software the files desired in the presentation are digitized, processed and prepared for import into author software. Each software has its own complex application structure to be learned before we can work with the author software.

Author software was generated in the last ten years by different companies. The absolute professional program Director of the American company *Macromedia* is exorbitantly expensive for many (recently 2800.- EU). The German company Siemens had developed a software package with the name *Toolbook Instructor*, whose Lite version was used with the nation-wide competition *Join Multimedia* for pupils. It was however still not user-friendly enough. Then there exists the software *Mediator*, popular in Germany, which shows a good price-to-performance ratio. I work with the Canadian software *Astound*, which is likewise affordable, particularly through institute licenses. It is extremely user-friendly, yet not less complex. I don't want to conceal that there is also a quite useful freeware version of an author software in the web, the Multimedia-Builder. This freeware and other helpful tools (e.g. a slide-show program, an audio-player, an audio/midi-sequencer-program, a midi-drum editor and various web freeware packages) can be downloaded free of charge.

Now an **example of the production** of a CD-ROM-presentation produced with *Astound*. For the purpose of demonstration I have separated some slides and duplicated some: the first one shows the original in the last version and on the second one I have removed some elements, to show the variety of possibilities. Hereby the substantial elements and advantages of CD-ROM- production become evident, but also the complexity and the time and energy one must invest.

The following processes have been demonstrated:

- Inserting the background colour, a picture, a text button with hypertext,
- a half transparent colour field,
- a picture and a slide show which is started through a start-over button,
- the integration of video through a picture button,
- a superimposing picture, a picture with textual information,
- picture changes with effects and the function of the timeline,
- the integration of a text with scroll field,
- the closing of a scroll field text with a button with the assistance of a marker within the timeline,
- an interactive image map with a tool tip etc.

Following this excursion into direct production practice, let me offer a few considerations concerning the target groups which can be reached through CD-ROM-production. The CD-ROM and also other media offer memory storage: that means they stabilise the dynamic status of the permanence of a cultural system. According to this we can differentiate **two categories of memory and functions of memory:**

- one is called the **storage memory,** where the archived cultural supply is stored and which is unhabitated in daily life, but which can be revitalised for special purposes and occasions;
- the other one is the **functional memory,** which deals with the daily efforts to ensure and feel sensually the mental identity with the feeling to be alive not only in a material way (Assmann, A.).

Generally, I see **five possibilities for the orientation of CD-ROM-production:**

- **reference on archiving,** i.e., the CD-ROM presents collected supplies in systematized form (target: storage memory/retrievable for specialists)
- **reference on information,** i.e. the CD-ROM presents materials with background information as much as possible (target: storage memory and functional memory/ lexicolisation)
- **reference on education,** i.e. supplies of information and inventories of materials will be arranged in such a way that learning processes are possible (target: rather functional, as storage memory/retrievable for the public)
- **reference on enter- and edu-tainment,** i.e. information and inventories are arranged in such a way that playful appropriation becomes possible into entertainment, such as into games, fantasy trips, offers of relaxation, multisensual possibilities (target: rather functional than storage memory/retrievable for those whom general educational efforts do not help)
- **reference on presentation,** which serves above all the illustration of information and material inventories, e.g. for a lecture or an advertisement demonstration (target: purely functional conviction of the audience/advertisement/increase of attraction of the verbal lecture and/or a print publication).

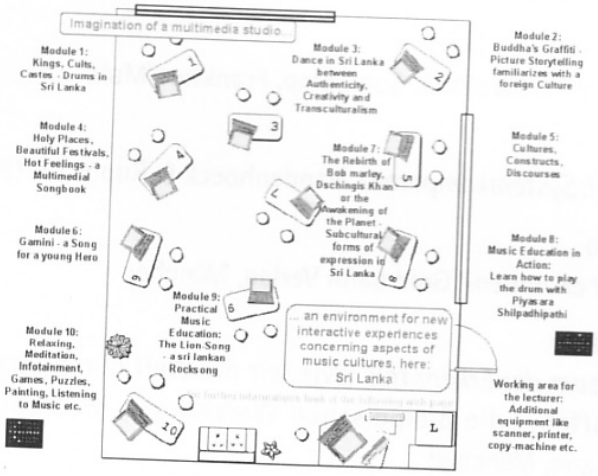
These target groups should be considered for the pedagogical perspective concerning the content.

Concerning the **didactic and methodical part,** I would like to refer to the **recent cognition research** (Varela) and to educational considerations called **Reformpädagogik/reform pedagogy** (Dewey, Montessori, Freinet etc.) in Germany. These pedagogues regard as an important medium the individual subtly diversifying in the classroom or within groups, in order to make the most of the potential of cognition of humans. That means that the idea is not a simple input-output procedure; instead, it is based on the fact that each individual has biographically- and culturally-shaped possibilities of connection when he encounters

new information and ideas, and he always constructs his own reality according to these pre-experiences. **New experiences can succeed under this premise only by two events:**

- by **perturbation** (breakdown perception) or
- by **perception of difference** (without distinction there is no structuring).

To that extent **environments for experience** must be created which generate motivation for these events. My suggestion is an internal subtly-diversifying work studio, which offers different aspects, e.g., related to a foreign culture, structured, e.g., in the form of CD-ROM-presentations, which can be experienced with the assistance of computer stations. Alternatively, two students could work at a station and try to become acquainted with a certain experience spectrum within a certain period (e.g. one semester) and also to find their own tasks. This looks like in the following illustration:



Pic.3: The multimedial interactive notebook studio as a possibility to approach foreign contexts in an internal subtly-diversifying way

Conclusion:

- the CD-ROM is suitable as a well-considered and -structured medium for dissemination, both for the perspective of the user and the producer;
- as an archiving medium, it seems rather unsuitable because of its limited storage capacity an its material consistence;
- as a structured preservation medium adapted to the storage capacity, it can be a recommendable, valuable addition, particularly also in relation to a print publication.

References:

Assmann, Aleida
1994. "Zum Problem der Identität aus kulturwissenschaftlicher Sicht". In: Lindner, Rolf (Hg.): Die Wiederkehr des Regionalen. *Über neue Formen kultureller Identität.* Frankfurt/Main

Assmann, Friese (Hg.)
1998. *Identitäten. Erinnerung, Geschichte, Identität. Suhrkamp,* Frankfurt/Main

Assmann, Aleida
1999.*Erinnerungsräume.* Verlag C. H. Beck, München

dies.
1999. *Zeit und Tradition. Kulturelle Strategien der Dauer.* Böhlau, Köln

Assmann, Jan
1992. *Das kulturelle Gedächtnis,* Verlag C. H. Beck, München

Assmann, Jan/Hölscher, Tonio (Hg.)
1988. *Kultur und Gedächtnis.* Suhrkamp, Frankfurt/Main

Kriz, Willy Christian
2000. *Lernziel: Systemkompetenz.* Vandenhoeck & Ruprecht, Göttingen

Maturana, Humberto
2001. *Was ist erkennen?* Goldmann Verlag, München

Maturana, H./ Varela, F.
1990. *Der Baum der Erkenntnis* (Wie wir die Welt durch unsere Wahrnehmung erschaffen - die biologischen Wurzeln der menschlichen Erkenntnis). Goldmann, München

Meister, Dorothee M./Sander, Uwe (Hg.)
1999. *Multimeda. Chancen für die Schule.* Luchterhand, Neuwied

Reich, Kersten
1997. *Systemisch-konstruktivistische Pädagogik. Einführung in Grundlagen einer interaktionistisch-konstruktivistischen Pädagogik.* Verlag Luchterhand, Neuwied

Schell, Fred/Stolzenburg, Elke/Theunert, Helga (Hg.)
1999. *Medienkompetenz.* Grundlagen und pädagogisches Handeln. KoPäd Verlag, München

Varela, F.
1990. *Kognitionswissenschaft - Kognitionstechnik.* Suhrkamp, Frankfurt/Main

Varela, Francisco J.; Thompson, Evan; Rosch, Eleanor
1995. *Der mittlere Weg der Erkenntnis. Der Brückenschlag zwischen wissenschaftlicher Theorie und menschlicher Erfahrung.* Aus dem Amerikanischen von Günter Holl. München: Goldmann

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