



The Media Dispositif as a middle-range concept for integrating empirical research on mediatized worlds

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Agenda

- A short intro to my project background
- Challenges with situatedness and complexity of media use
- A 3-tier analysis approach to everyday media use
- A glimpse into Media Repertoire Analysis
- A glimpse into Media Affordance Analysis
- Tenets of Empirical Media Dispositif Analysis

“Survey Music and Media”: Background and Aims

- DFG-Research project
“Survey Music & Media – Empirical Basic Data and Theoretical Modeling of the Mediatization of Everyday Music Reception in Germany”



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- understanding complex ***relationships between media technologies and people*** alongside cultural development and ***long-time social change*** (→idiachronic comparative perspective)
- Project within the Bremen-based DFG-Priority Program “Mediatized Worlds” (2010-2016)

Growing challenges with the *situatedness* and *complexity* of everyday (*trans*-)media use

Growing challenges with “media of the 3rd degree” (Jensen 2010):

- Media devices are increasingly mobile
- Media devices are increasingly multifunctional
- Media content is increasingly interoperable and omnipresent
- Devices and contents may be combined sequentially or concurrently

People may develop complex intertwined and situated media practices:


- Some are short-termed, some more long-termed
- Some are performed once, some seldom, some repeatedly
- Some are theme-specific, some are generalized
- Some are unique to single actors, others are widely shared patterns

How do we deal appropriately with these issues in empirical inquiry on societal mediatization processes?
(i. e. mediatization of everyday music listening)

Pattern recognition & critical realist causal explanation **as possible approaches to present challenges**

- *"Faced with information overload, we have no alternative but pattern recognition."*
(Marshall McLuhan)
- **Theoretical aim:**
Researching *mediatization processes* by (1) empirically identifying causal processes as *emerging patterns of media use* and (2) describing the *causal mechanisms* that produce *emergence, actualization and (long-term / large scale) change of patterns*
- **Basic methodological idea in the face of complexity:**
Combine *extensive data mining procedures* that detect patterns of habitual media use with *interpretive qualitative studies* and *laboratory experiments / observations*
- **Main challenge:**
Modeling the *fuzziness* of everyday situated engagement with media on *different layers of ontological abstraction* while at the same time allowing for *emerging vertical causality*

A 3-tier pattern approach to everyday media use

- **Media Repertoires** – Societal Level (emerging patterns / trajectories)
 - Habitual *patterns of (trans-)media user data* regarding different devices / content
 - Centering around shared basic lifeworld issues and / or developmental tasks
 - Inductively detectable by analysis of large scale (representative) data sets (surveys / log files)
(→ Hasebrink & Popp 2006)
- **Media Dispositifs** – Milieu/Lifestyle Level (forms of situated action) 
 - Shared *situated and embodied ritualized practices* employing media devices & symb. content
 - Widely shared “hatcheries” of emerging, changing and declining Media Repertoires
 - Socio-Material “infrastructures” for the habitual *enactment* of Media Affordances
 - Carved out abductively through interpretive analysis of ethnographic, interview or focus group data
(→ Lepa & Geimer 2011)
- **Media Affordances** – Psychobiological Level (mechanisms of embodied mediation)
 - *Action-Potentials* embodied/enabled by the material form of artifacts
 - *Hidden* but *real* causal powers for agents with correct “endowment” (body & competencies)
 - *Better*: Emerging interactional superstructures (similar to “actor-networks”)
 - have to be *perceived* either on basis of “direct specification” or “cultural conventions”
 - have to be *realized* through practical agential enactment
 - Deductively demonstrated by experiments or participatory observation
(→ Zilien 2008, Hutchby 2001)

I.

**A GLIMPSE INTO
MEDIA REPERTOIRE ANALYSIS
(AS WE DO IT)**

Media Repertoire Analysis I:

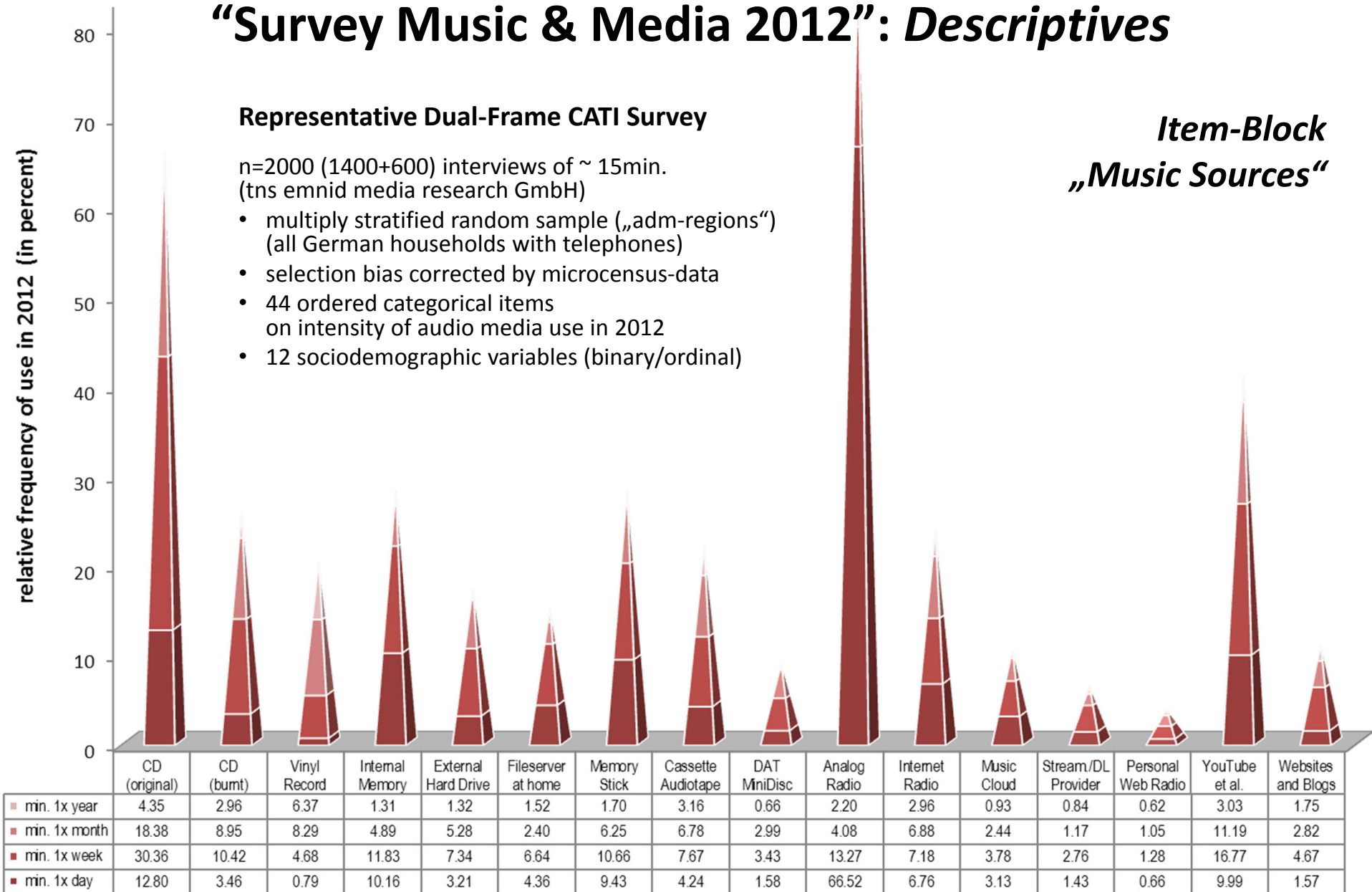
“Survey Music & Media 2012”: *Descriptives*

Representative Dual-Frame CATI Survey

n=2000 (1400+600) interviews of ~ 15min.
(tns emnid media research GmbH)

- multiply stratified random sample („adm-regions“)
(all German households with telephones)
- selection bias corrected by microcensus-data
- 44 ordered categorical items
on intensity of audio media use in 2012
- 12 sociodemographic variables (binary/ordinal)

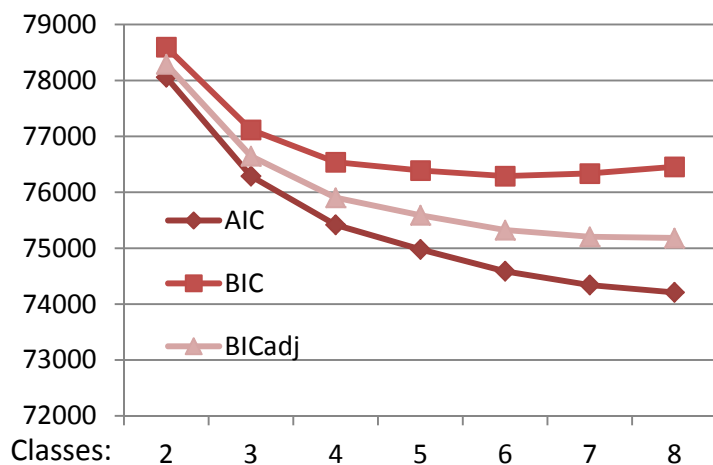
Item-Block *„Music Sources“*



Media Repertoire Analysis I:

“Survey Music & Media 2012”: *Latent Class Analysis*

Classes	Starts	Initial Iterations	Optimizations	Time	Processors	3 Replications	Boundaries	Entropy	AIC	BIC	BIC _{adj}
1	5000	35	500	00:01:08	2	yes	0	-	138659.953	138984.806	138800.537
2	5000	35	500	00:07:54	2	yes	0	0.927	78056.535	78594.221	78289.224
3	5000	35	500	00:24:13	2	yes	0	0.879	76287.109	77116.043	76645.839
4	5000	35	500	00:38:02	2	yes	0	0.862	75417.569	76537.749	75902.338
5	5000	35	500	00:57:40	2	yes	0	0.841	74978.426	76389.854	75589.236
6	<u>50000</u>	<u>500</u>	<u>5000</u>	<u>15:11:55</u>	<u>2</u>	<u>yes</u>	<u>0</u>	<u>0.862</u>	<u>74587.003</u>	76289.677	<u>75323.853</u>
7	100000	1000	10000	21:01:42	4	yes	0	0.867	74340.549	76334.470	75203.439
8	100000	1000	10000	47:45:52	4	yes	0	0.866	74209.059	76455.020	75181.022

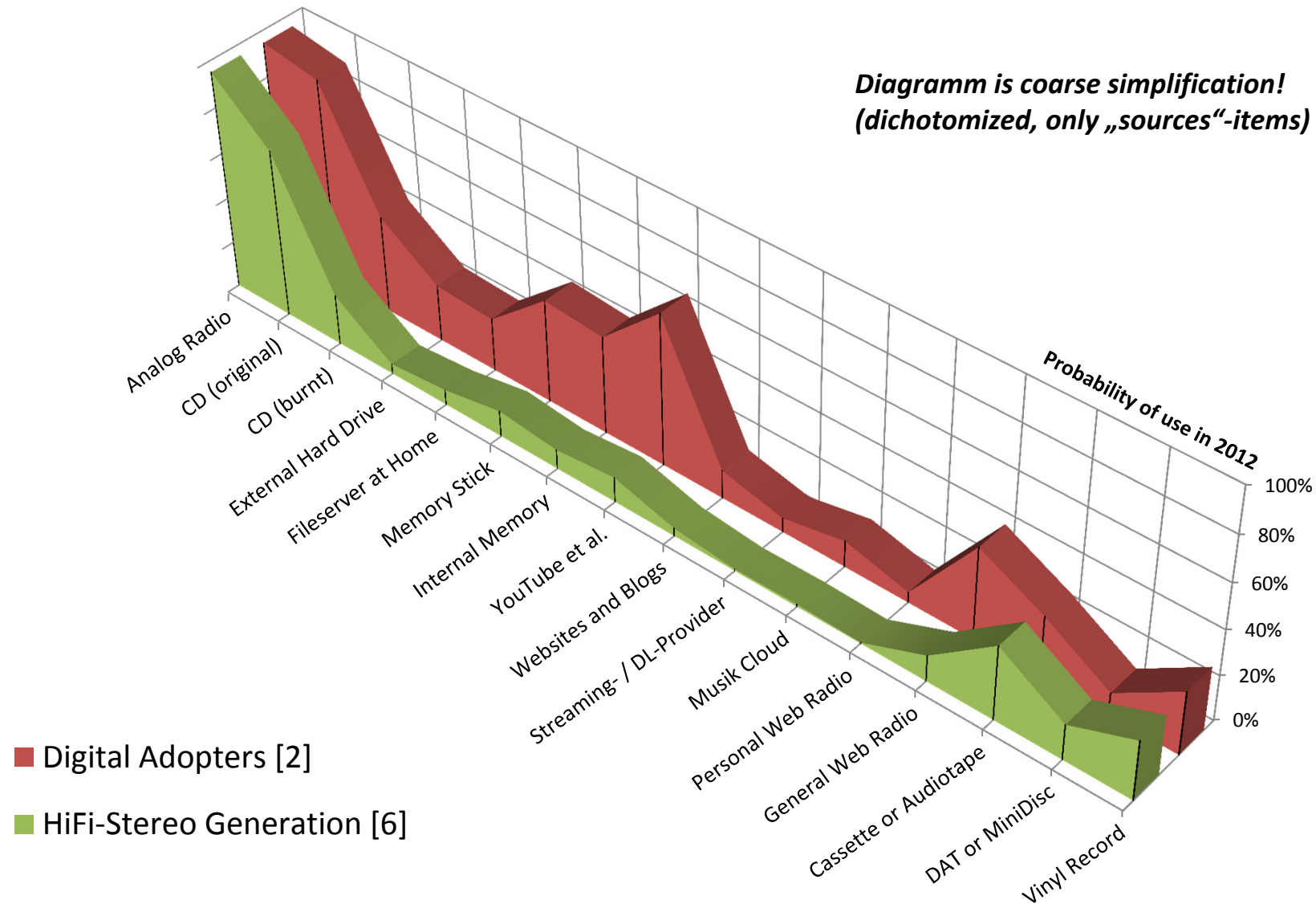


44 ordinal indicators and 7 passive covariates

average latent class probabilities by potential class membership

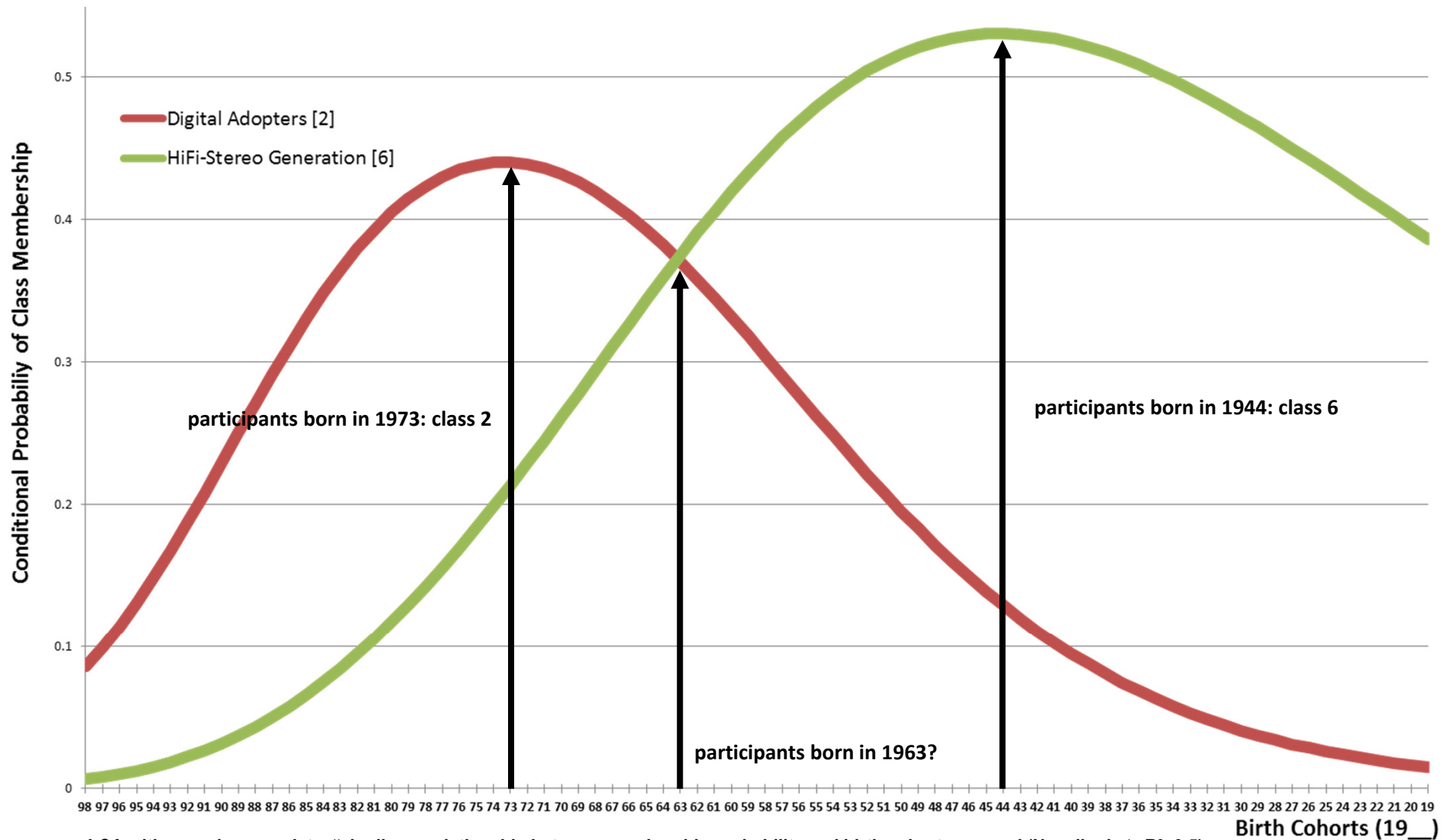
	Class 1 (10 %)	Class 2 (21%)	Class 3 (7 %)	Class 4 (10%)	Class 5 (23 %)	Class 6 (29 %)
P(class=1)	0.887	0.072	0.001	0.041	0.000	0.000
P(class=2)	0.030	0.875	0.017	0.028	0.000	0.051
P(class=3)	0.000	0.036	0.909	0.028	0.009	0.018
P(class=4)	0.032	0.060	0.018	0.891	0.000	0.000
P(class=5)	0.000	0.000	0.006	0.000	0.925	0.069
P(class=6)	0.000	0.040	0.006	0.000	0.042	0.913

Media Repertoire Analysis I [Detection]: “Survey Music & Media 2012”: *Latent Class Profiles*



Media Repertoire Analysis II:

“Survey Music & Media 2012”: *Birth Cohort Analysis*



LCA with „passive covariates“, loglinear relationship between membership probability and birth cohort assumed (Nagelkerke's $R^2 \sim 0,5$)

Media Repertoire Analysis II:

“Survey Music & Media 2012”: QCA Analysis

- Identify additional explaining variables:

Fuzzy-Set Qualitative Comparative Analysis (Ragin 2000) of „borderline conditions“

Fuzzy Truth Table for “HiFi-Stereo Generation” [class 6] vs. “Digital Adopters” [class 2] (both birth cohort 1963)

sex(f)	migrant	child@home	edu_fuzzy	income_fuzzy	urbanity_fuzzy	no. of cases	outcome	consistency
0	0	1	0	0	0	1	class 6	1
0	0	0	0	0	0	1	~	0.855072
0	0	0	1	0	0	1	~	0.810811
0	0	0	0	0	1	1	~	0.769231
1	0	0	0	1	0	1	~	0.608247
1	0	0	1	1	1	3	~	0.568493
0	0	0	1	1	0	3	~	0.528302
1	0	0	1	0	1	3	~	0.520833
1	0	0	1	0	0	2	~	0.444444
0	0	0	1	1	1	4	~	0.385093
0	1	0	1	1	0	1	class 2	0
1	0	1	1	1	1	2	class 2	0

Fuzzy-Set QCA for Class 6 and Class 2, birth cohort 1963

causally sufficient conditions:	consistency	coverage	case coverage
Class 6 = f (male & low_income)	0.682	0.273	6
Class 2 = f (migr. female & child@home)	1.000	0.250	6

Quine-McClusky Algorithm (True 1-L, 13 Rows, 23 cases, consistency cut-off 0.7)

**Heuristics for identifying
,extreme cases‘ as informants:**

→ Check for respective informants ≤1963

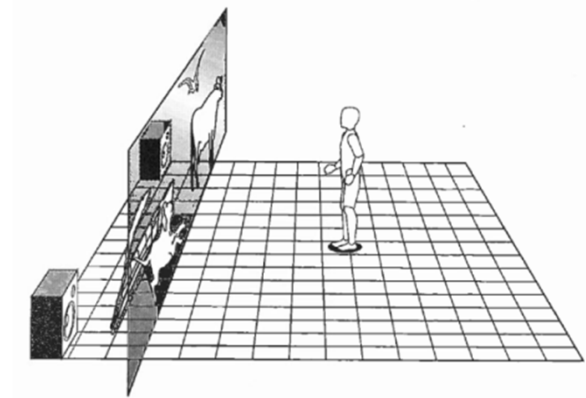
→ Check for respective informants ≥1963

II.
A GLIMPSE INTO
MEDIA AFFORDANCE ANALYSIS
(AS WE DO IT)

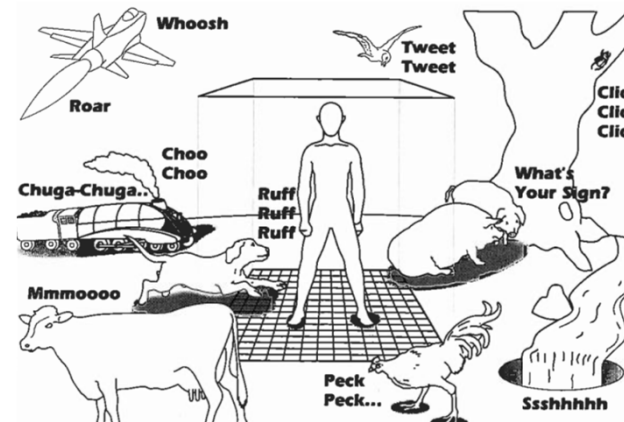
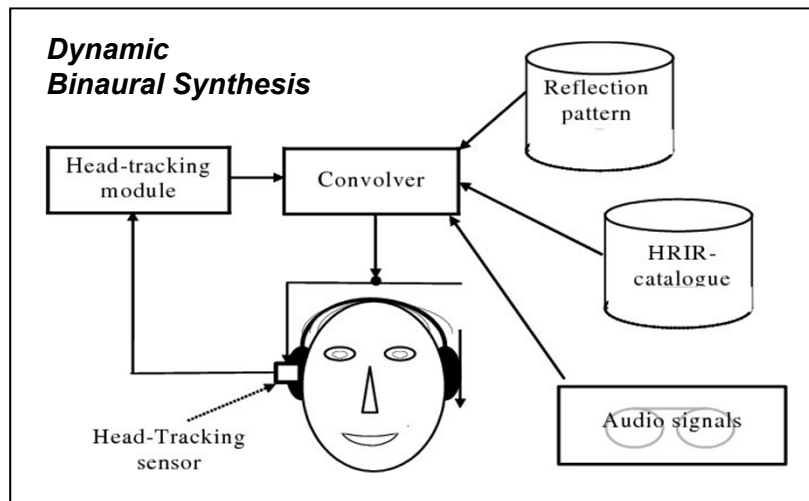
3 ideal-typic media spatializations of sound & music



„Headphone Stereo “



„Stereo Speakers in Living Room“



„Live Performance / Concert“

Musical Content (of course!) makes a difference!

Factor 1: happiness & fun

happiness (1)
amusement (15)
humour (21)

Factor 2: love & desire

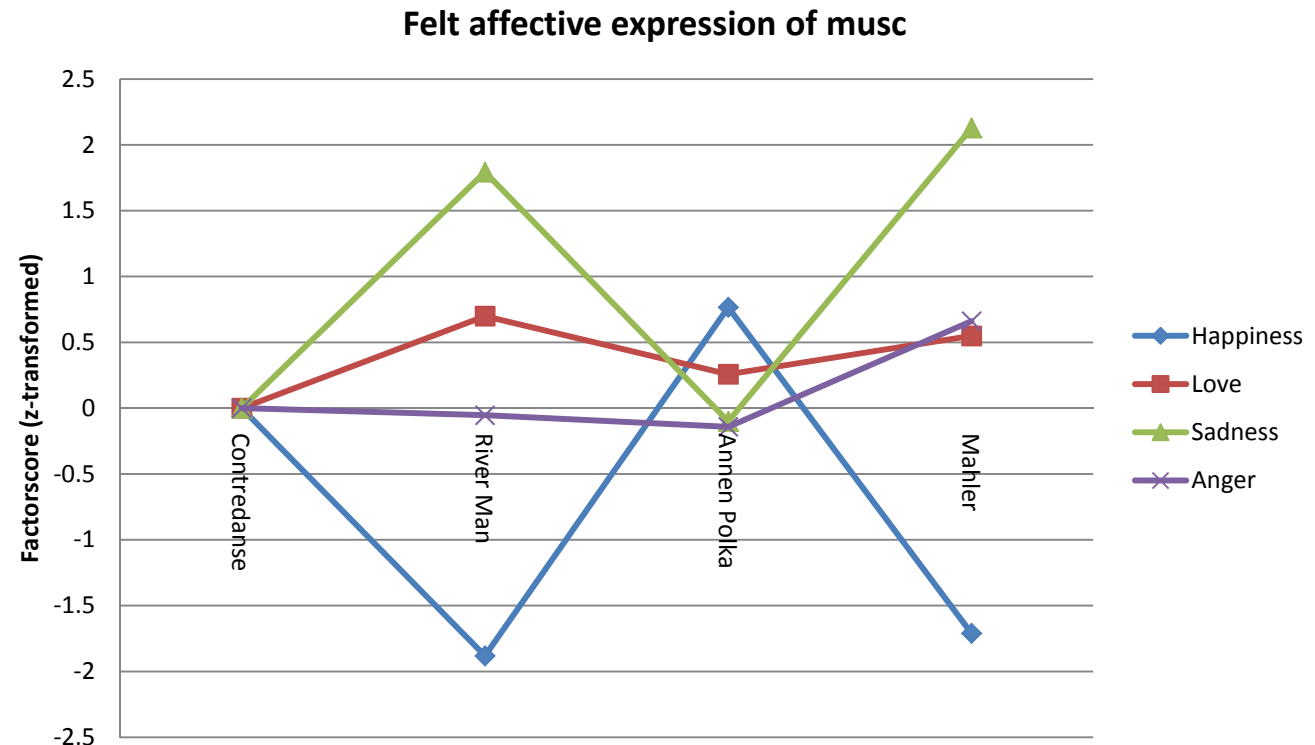
love (5)
tenderness (11)
hope (28)
desire (30)

Factor 3: sadness & pain

sadness (3)
disappointment (4)
regret (18)
pain (29)

Factor 4: anger & tension

anger (9)
outrage (12)
confusion (14)
tension (25)



Experimental Design:

306 subjects listened to 4 musical pieces (classics, jazz, pop) in 3 different media spatializations with 2 different instructions

questionnaire and physiological measurement data were analyzed by **exploratory multi-level structural equation modeling**

Control Variables:

Sociodemographics, Mood State (PANAS), Mood-Trait (NFA)

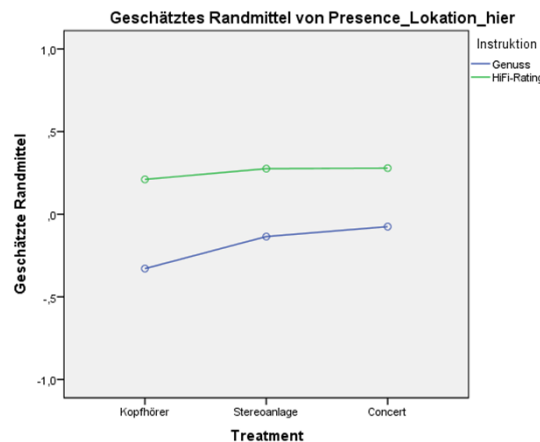
Social Constructions make a difference!

- Instructional manipulation:**

„Today, we will conduct an experiment with a newly-developed music playback-technology.

Please listen carefully, because maybe you will notice something striking about the experience!“

(→ enforce quality expectation)



	parameter estimation (Z-score)
predictor variable:	<i>Spatial Presence</i>
stereo unit (vs. HP)	0.224
concert (vs. HP)	0.345
quality expectation	0.467
R² (incl. controls)	0.098



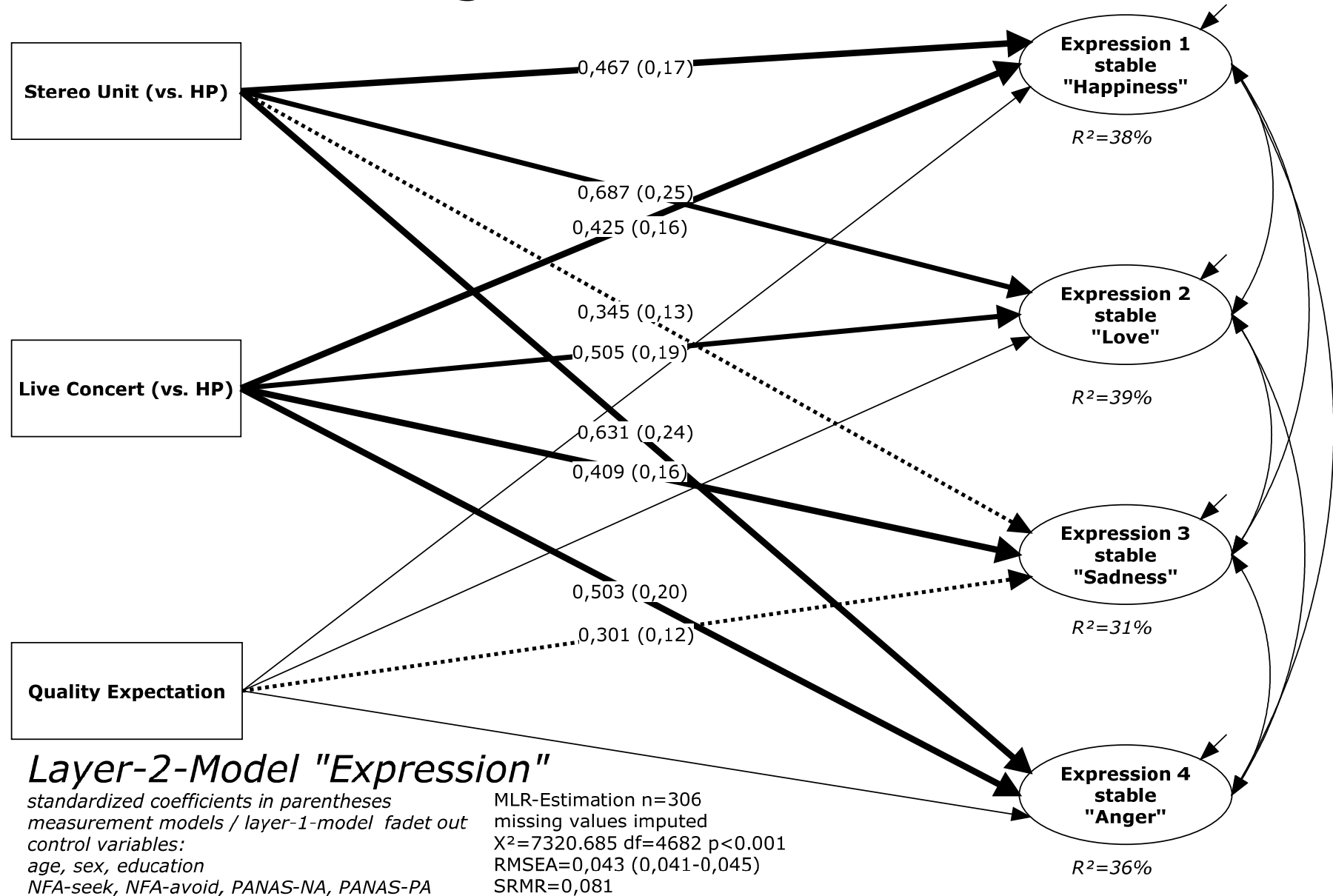
- Treatment check:**

Administration of a 10-point Likert-Scale for the measurement of *spatial presence feeling* after the reception of all 4 pieces (Adopted fr. Wirth et al. 2008)

Spatial Presence Items

- „I had the feeling, to be in midstream of sonic events, instead of being outside.“ (1)
- „I felt myself as a part of the presented auditory space.“ (3)
- „It was as if my own location had moved to the presented auditory surroundings.“ (9)
- „I had the impression of being able to dive into the experienced sound.“ (16)

Material Technologies make a difference!



III.

TENETS OF MEDIA DISPOSITIF ANALYSIS

Empirical Media Dispositif Analysis: The basic ideas

- Intensive Data (Interviews / Observations) on **most typical members** of a certain media repertoire is collected
- Grounded Theory is employed for **open coding of all phenomena related to media use** within the material
- Information on dispositif structures is afterwards categorized by help of a special **coding paradigm**:
 - **Situational Context**
 - Time / Place
 - Functional Context
 - **Media Employed**
 - Hardware / Technologies
 - Symbolic Content
 - **Related Discourse**
 - Rules
 - Claims
 - **Embodied Agency**
 - Practices
 - Experiences
- Elements of **documentary method** (Nohl 2010) help to discriminate **discursive and practical knowledge**
- Dispositif structures shared across informants are identified through **constant comparison**
- An **ideal-typic map** of every identified shared dispositif is created as preliminary description of the enactment mechanism of habitual orientation, contributing informants are interpreted as „potential enactors“
- Identified mechanisms may be **deductively tested** by experiments/observation in media affordance analysis



Origins of the Concept of Media Dispositif in Film and Television Studies

- **Seminal Texts from Baudry:**

- “Ideological Effects of the basis cinematic apparatus”
«Cinéma: Effects Idéologiques Produits par l'Appareil de Base» (Baudry, 1970)
- “The dispositif: metapsychological observations of the reality impression”
«Le dispositif. Essai de métapsychologie du cinéma» (Baudry 1975)

- **Adoption in German Television & Media Studies:**

- “Dispositiv Fernsehen” (Hickethier 1995)
- „Werbung, Medien & Kultur“ (Schmidt 1995)

- **Basic Notion:**

- Widespread *typical arrangements* of social frames, media technologies, symbolical content, related discourse and embodied practices (i. e. “cinema” / “tv in living room”)
- Elements are expected to produce a stable form of (hegemonial) social order, by means of technologically *subordinating the subject to “become a media effect”* through power of the “apparatus” structure (“bourgeoise ideology” purported by “male central-perspective gaze”)

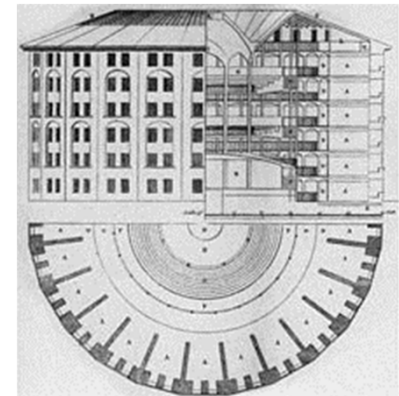
- Neglect of a praxeological-emancipatory perspective (notion of „strong media effects“)
- Non-applicable to nowadays complexity and fuzzyness in media use



Dispositif Analysis as an Extension of Foucauldian Discourse Analysis

- **Basic idea from Michel Foucault:**

“What I’m trying to pick out with this term is, firstly, a thoroughly heterogenous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions—in short, the said as much as the unsaid. Such are the elements of the apparatus. The apparatus itself is the system of relations that can be established between these elements.” (Foucault 1977), similarly: Lyotard (1982), Deleuze (1991)



- **Adoptions in the Context of Empirical Critical Discourse Analysis:**

- „By means of *dispositiv analysis*, interactions between dominant orders of knowledge, discursive and non-discursive practices (in the everyday), their symbolic and material objectifications as well as the resulting forms of subjectifications may be empirically analyzed and interpreted in terms of power“ (Bührmann & Schneider 2008)
- “*Dispositives* can be understood as the synthesis of discursive practices (i.e. speaking and thinking on the basis of knowledge), non-discursive practices (i.e. acting on the basis of knowledge) and materializations (i.e. the material products of acting on the basis of knowledge). [...] People derive this knowledge from the discursive surroundings into which they are born and in which they are enmeshed throughout their lives“ (Jäger & Meyer 2009)
- „I shall call an *apparatus* literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviors, opinions, or discourses of living beings.“ (Agamben 2009)

- problems regarding reconstruction / theoretical neglect of practical a-theoretical knowledge
- problems regarding empirical reconstruction of non-discursive effects of the arrangement
- strong tendency to broadly extent the concept in terms of scope („language“ / „sex“ / „death“)

A Critical Realist Approach to Empirical Media Dispositif Analysis

- **Suitability of the dispositif concept for emp. analyses in Mediatization research:**
 - “Baudry concept” is too deterministic / static / exhibits „theory bias“
 - “Foucault concept” is too broad / developed methods exhibit „discursive bias“
- **Still, the Dispositif approach is an *interactional concept of situated media use* far more (empirically) developed than i. e. Actor-Network-Theory (Latour 1987) and stresses (realistically) the *possibility of human emancipatory action* (within limits)**
- **Theoretical arguments for a „3rd way“ in media dispositif analysis:**
 - ***Conceive of subjects as neither autonomous, nor determined but as constrained actors:***
„Using a technology, every single person, as a user knowing "what it is for," is put into a previously defined subjective position and is, in these terms, an effect, constituted and determined by technology; however, because individual use is constitutive for the use of technology, every single person, by using a technology, presents at least a potentiality of using it differently, or even contrary to 'what it is for.'” (Zajc 1999)
 - ***Conceive of “uses and grats” of technologies as open empirical question, strongly related to (initially) non-discursive experiences, actions and knowledge:***
“we are surrounded by technologies for which it is not at all clear "what they are for." To use various technological devices, we indeed need user manuals, but this does not imply that we cannot use these devices without or even in ways not prescribed, by user manuals “ (Zajc 1999)

Empirical Media Dispositif Analysis:

Metatheoretical background of our approach

- Media Dispositifs are **ideal-typic social frames** (Goffman 1971) of **everyday ritualized action with media technologies** (Rothenbuhler, 1998) that help to **produce, maintain, repair and create a shared social reality** (Carey 1989) for members of a **generational unit** (Mannheim 1928)
- **complex socio-technological configurations within situational frames that serve as resources** which may be employed for the **enactment of shared major habitual orientations** (e. g.: identity work, basic needs, developmental tasks, etc.. → the “sacred” in terms of Durkheim)
- **Typical Dispositifs:** Cinema, Sports Bar, Rock Concert, Livingroom-TV, Mobile-Player-in-S-Train
- Media dispositifs’ **quasi-stable properties** (whether material, symbolic or discursive) may play a **constraining or enabling role for certain ways of habitus enactment** which leads to the experience-based assignment or theoretical anticipation of their respective **enactment potential** *from the perspective of specific agents* (“this works / doesn’t work for me”)
- If there is **ample enactment potential, agents develop implicit routines / “situation-specific orientation patterns”** (Bohnsack 1989) that help them with habitually enacting their major orientations drawing on tacit, a-theoretical embodied knowledge (Polanyi 1958)
- These successfully enacted routines contemporaneously **stabilize the higher order habitus as well as the dispositif structure** by evoking experiences of ‘natural **embeddedness**’ and, resultantly, **affective contagion** (Schäffer 2007)

Empirical Media Dispositif Analysis: Research Steps

1. Identification of Media Dispositifs:

Which relevant (in terms of pervasiveness and repeated/ritual engagement) media dispositif structures do exist with regard to the field in focus?

→ Gain suitable informants from Media Repertoire Analysis

2. Description of Media Dispositifs' Structures and Properties:

What are the media dispositifs' structural elements properties and how can their respective roles be qualified and comprehended as *potentialities* disentangled from the view of specific subjects?

→ episodic interviews, analysis *across cases* by adoption of Grounded Theory

3. Analysis of Habitual Practices and Experiences within Media Dispositifs:

Which different habitual orientations of users may successfully be enacted within identified media dispositifs and why and how?

→ biographical / narrative interviews, analysis *within cases* by Documentary Method

4. Triangulation of Findings with Repertoire and Affordance Analysis:

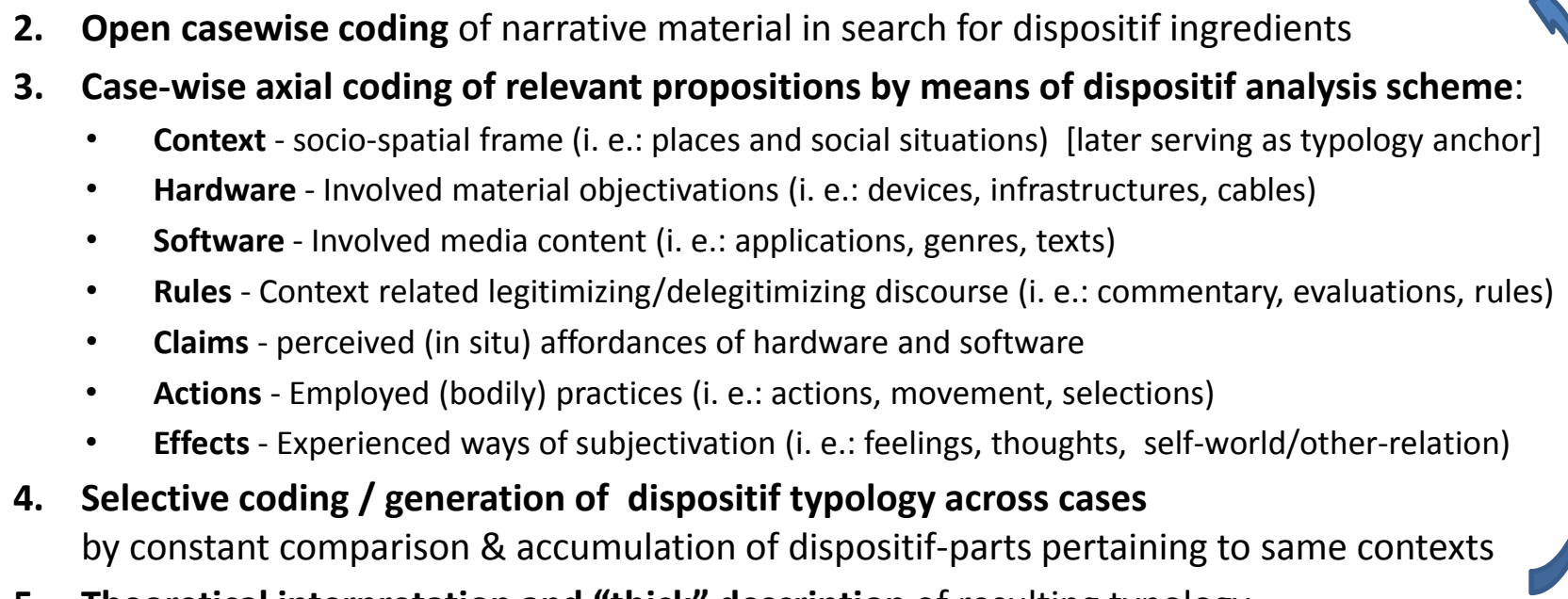
Which of the dispositif structural properties identified play a dominant role for the actual enactment of affordance mechanisms or as hatching grounds for repertoires?

→ Triangulations by means of Group Contrast (Affordances, Repertoires)

Drawing Maps of Media Dispositifs:

A basic coding paradigm for narrative material

- Based on Strauss & Corbin's (1996) Grounded Theory approach :

1. **Qualitative data acquisition** in research field (i. e. interviews on everyday music listening)
 2. **Open casewise coding** of narrative material in search for dispositif ingredients
 3. **Case-wise axial coding of relevant propositions by means of dispositif analysis scheme:**
 - **Context** - socio-spatial frame (i. e.: places and social situations) [later serving as typology anchor]
 - **Hardware** - Involved material objectivations (i. e.: devices, infrastructures, cables)
 - **Software** - Involved media content (i. e.: applications, genres, texts)
 - **Rules** - Context related legitimizing/delegitimizing discourse (i. e.: commentary, evaluations, rules)
 - **Claims** - perceived (in situ) affordances of hardware and software
 - **Actions** - Employed (bodily) practices (i. e.: actions, movement, selections)
 - **Effects** - Experienced ways of subjectivation (i. e.: feelings, thoughts, self-world/other-relation)
 4. **Selective coding / generation of dispositif typology across cases**
by constant comparison & accumulation of dispositif-parts pertaining to same contexts
 5. **Theoretical interpretation and “thick” description** of resulting typology
- 

Special Analytical Problem: Discrimination of *Discourse* and *Practice*

- **Documentary Analysis of biographical Interviews (Nohl 2010) is a methodology able to discriminate different types of knowledge stocks within narrative material:**
 - Communicative Knowledge → Referencing Common Sense Discourse (Rules and Claims)
 - Conjunctive Knowledge → Referencing Habitual Orientation Patterns (Actions and Effects)
 - ***Central Challenge of the Dispositif Approach (does discourse “overtake” practice or vice versa?)***
- **This is practically accomplished by**
 - Sequential case-wise analysis in search for densely, anecdotal / metaphoric narrations
 - Case specific reconstruction of orientation patterns via identification of homologies
 - Comparison of extracted passages with those of other informants to identify heterologies in orientations
- **This way, Documentary Method helps empirical media dispositif analysis to**
 - Discriminate common discursive knowledge about dispositifs enactment potentialities from actual habitual practices and intensive affective experiences of specific user collectives
 - Identify and describe habitual enactments within certain media dispositifs that manifest themselves in implicit situation-specific routines and trace these back to common higher order habitual orientations
 - Identify biographical user experiences that help to explain the specific enactment potential of certain media dispositifs from the perspective of the respective identified orientation

Identifying Group Contrasts: Interface to Affordance and Repertoire Analyses

- Nowadays Qualitative Data Analysis Software (i. e. MaxQDA) allows for complex forms of case comparisons through „activation logics“ that help to work out group contrasts for means of data triangulation:
 - Do all users of a certain dispositif belong to the same repertoire?
 - Do all users of a certain dispositif perceive and realize the same affordances?
 - Are all users of a certain dispositif constrained in the same way?
 - Do all members of a repertoire enact the same dispositif in the same way?
 - a. s. o.
- On this way, triangulation of data from macro-, meso- and micro-tier is realized and vertical causal processes between layers may be demonstrated
- Media Dispositif Analysis Results may also give rise to **adoptions in survey design** of Repertoire Analysis or to new laboratory experiments / ethnographic observations in order to **demonstrate narratively implied media affordances**

Thank you for your patience!

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