German *Media-Analyse* (MA):
A Large Scale Commercial Data Source Available for Secondary Analyses on Media Use and Social Change

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The so-called *Media Analyses* (*Media-Analyse* = MA, 1972 to 2000) and their predecessor studies, the *Reader Analyses* (*Leser-Analyse* = LA, 1954 to 1971) provide comprehensive information on media use in former West Germany and later in unified Germany. They were commissioned by the *Media Analysis Group* (*Arbeitsgemeinschaft Media-Analyse* = AG.MA), a union of more than 250 publishing houses and broadcasting companies, in order to enable its members to plan programs and to calculate advertising prices. AG.MA spends more than 8 million euros per year on data collection. In 1968, it founded a subsidiary company, *Media-Micro-Census GmbH,* which is responsible for the MA surveys; the field work is administered by a few different market research institutes every year.

In the first place, the MA serve to establish the "currency" for the calculation of the advertising prices of virtually every specific supplier in all of the media: radio, television, newspaper / magazines, cinema, and in the future, also the Internet. Once they have served this purpose, the MA can also be used for secondary analyses of media use, leisure time and social structure. Due to the extraordinarily long time period covered, the substantive comprehensiveness (all media, time budgets of an average week day, broad socio-demography), the largely constant question program and the extremely large sample size (up to 60,000 respondents) they offer outstanding opportunities to analyze social and cultural change in general. Yet they are not ready-made for this purpose. In order to facilitate their use, the *Medienwissenschaftliches Lehr- und Forschungszentrum der Universität zu Köln* (MLFZ), has tackled the technical and substantive obstacles to easy analysis. The following article gives an overview of problems and possibilities. First, survey design, technical specification and access are introduced; second, an overview of the contents and their potential for longitudinal analysis is given; finally, published and planned analyses are described.

1. Survey design, technical specifications, access

The chronology of the survey modes, the publication periods and the media covered by the LA and MA surveys is presented in Table 1. The LA was published bi-annually from 1954 to 1958, and annually from 1969 to 1971. As the electronic media were also covered in the surveys from 1972 onward, the name was changed to MA (Buß 1998, 77).

Table 1

Chronology

Years	Study	Survey mode	Publication period	Media covered
1954 – 1958	LA	face-to-face	biannual	Press
1960 – 1971				
1972 – 1986	MA		annual	Press + Radio / TV
1987 – 1996	MA PM			Press
	MA EM			Radio / TV
1997 – 1999	MA PM		biannual*	Press
	MA Radio		annual*	Radio
2000 –	MA PM	face-to-face**	biannual	
	MA Radio	CATI	biannual***	

PM = press media (newspaper, magazines); EM = electronic media (Radio, TV).

* 1998: Two biannual MA Radio; one MA PM.

** Since the second PM 2004 10% of the interviews were realized with the method of CASI (Computer-Assisted Self-administered Interview; www.agma-mmc.de, 2005).

*** Only one MA Radio in the year 2000.

Until 1986 the MA covered the use of all media (radio, TV, newspaper, magazine, cinema) in one single survey. Since 1987 it was split into the two tranches *press media* (PM) and *electronic media* (EM)[1]. From 1972 to 1999 interviews were made face-to-face. Since 2000 the radio interviews are made by CATI (Computer assisted telephone interviewing) and the press media is still administered face-to-face.

The sampling population is defined as the "German population, resident in private households at the place of the main domicile and aged 14 and more years" (Ebert 2003, 149; Klingler / Müller 2000). Up to the mode change in the MA Radio 2000, this population was sampled by the three-stage random

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[1] The electronic media tranche MA EM includes radio and TV data. Since 1997 the MA EM focus primary on radio use. Since 2000 the AG.MA calls this tranche Radio.

sampling technique of the association of *German Market and Social Research Institutes* (*Arbeitskreis Deutscher Markt- und Sozialforschungsinstitute* = ADM). Its first stage is an area sample, its second stage a random-route sample of households, and its third stage a random sample of respondents within households (Hoffmeyer-Zlotnik 1997; Behrens / Löffler 1999). After the transition to CATI the sampling procedure was based on telephone numbers (Gabler / Häder 1997).

Every year, the data are given to the *German Central Archive for Empirical Social Research* (*Zentralarchiv für empirische Sozialforschung* = ZA) for scientific use one year later. As of today, LA files from 1954 to 1971 and MA files from 1972 to 2003 have been delivered to the ZA.

The data are saved in binary format so that they cannot be opened easily with SPSS or other statistical programs commonly used in the social sciences. There are three reasons for this. *First,* punch card storage was the conventional procedure at the beginning of the survey series in the 1950s. Later these early data sets were "electronically archived" in punch card format. *Second,* members of AG.MA need not concern themselves with formats because they do not work with the original data sets as a rule, but with aggregate measures and probabilities computed by special programs like "DAP-Cross". *Third,* the large sample size and variable numbers requires a space-saving procedure which is furnished by binary compressing storage using all byte fields.

In order to make the MA easily available for scientific analyses, the data have to be converted into an SPSS compatible format. This can be done with the specific SPSS syntaxes. As of today, the MLFZ has converted the original 314 LA and MA files from 1954 to 2002 for SPSS-use. The data can now be used under the usual conditions (citation of donor, no further distribution) for scientific purposes – in particular, for doctoral, diploma, and master theses, and seminars or research practice courses in communications, social and economic sciences. They can be ordered by letter or fax from the MLFZ; depending on size, data will be sent as an e-mail attachment or by mail on CD-ROM or DVD. Furthermore, the original questionnaires and the code plans have been archived in the MLFZ; the scanned questionnaires can be downloaded free of charge from the MLFZ homepage (www.wiso.uni-koeln.de / medien /).

2. Topics and potential for longitudinal analyses

The main topic of the MA, of course, is media use. Yet it also contains information on some attitudes, behavior, time budgets, and socio-demographic characteristics of the respondents. The number of variables opens up such a wide array of analytical possibilities "that the globe would no longer exist if

someone performed all of them" (Scheler 1979: 1369; our translation). In order to allow for the planning of longitudinal analyses, the service tools *"ladatsyn1.0"* (LA) and *"madatsyn1.0"* (MA) were developed by the MLFZ (Hagenah / Akinci 2003) to take stock of all variables surveyed between 1972 and 2000 – more than 32,000 – and indicate when and how often they have been replicated together with the variable number of each data set. Table 2 is an excerpt of the short version *"madatsysn1.0_short"* which lists only the first and the last survey and the number of replications in between. We give a brief overview – first for the core data on media use, then for the socio-demographic and further data.

2.1 Media use

In order to assess the potential of longitudinal analyses of the media use data, one must know how these data have been collected. There are two segments, called the *non-specific* and (channel- or title-)*specific* media use.

The *non-specific media use* is surveyed in three modules: (I) *Leisure activities frequency scale:* Frequency of use of radio, TV, newspapers and magazines as well as visits to the cinema and other leisure activities, such as sports and entertainment, on a five-point scale from "never" to "several times a week". Unfortunately, the upper end of this scale does not differentiate enough among heavy use of TV and radio. Yet it can be used to analyze media use as one aspect of leisure time among others (Wahl 2003). (II) *Weekly frequency of radio and TV use:* How many days of a normal week has radio or TV been used in the early morning, late morning, noon, during the afternoon or in the evening. (III) *Presence (since 1966) and numbers (since 1984) of TVs and radios in the household:* This was surveyed continuously from the beginning of the MA survey along with other questions on technical equipment in the household.

Specific media use is surveyed in three consecutive modules and the time budget module. To start, (I) the *general filter* question ascertained if each channel or press title available at the time of the survey had been ever heard, seen or read before. For those mentioned, then, (II) the *time filter* ascertained the time point of their last use. And again for those mentioned, (III) the *frequency module* inquired as to how many days per week a radio program or TV channel was listened to or watched, and how many of the last 12 issues of a magazine were read. (IV) The *time budget* module ascertained the dominant activity for each quarter of an hour between 5 a.m. and 12 p.m. of the previous day. From this information, the total time devoted to radio or TV use can be computed – as well as time of use during specific periods of the day. Moreover, further activities inside and outside the household were surveyed and similar indices can be constructed. Each of these four modules allows a comparison between the media radio, TV, and press.

Table 2

Excerpt from "madatsyn1.0_short"

line	Data collection characteristics	Number of repli-cations	First Collection	Last Collection
275	*Characteristics of the interviewees*			
277	Sex	**50**	MA 72 / I	MA 00 PM II
278	Age	**50**	MA 72 / I	MA 00 PM II
281	Education	**50**	MA 72 / I	MA 00 PM II
408	*Cooperation of the respondent*			
415	Interest in the topic of the interview	**42**	MA 79	MA 00 PM II
416	Willingness to cooperate in the interview	**42**	MA 79	MA 00 PM II
641	*Household appliances*			
643	VCR	**40**	MA 81	MA 00 PM II
644	Car	**49**	MA 72 / I	MA 00 PM II
733	*Animals in the household*			
736	Cat	**47**	MA 74	MA 00 PM II
782	*Leisure activities and attitudes*			
789	Radio use	**37**	MA 84	MA 00 PM II
794	Knitting, crocheting	**33**	MA 87 EM	MA 00 PM II
853	Political party preference	**19**	MA 78	MA 90 PM
858	Last longer holiday trip	**31**	MA 76	MA 00 PM II
866	*Shopping preferences*			
872	Discount shop	**25**	MA 78	MA 96 EM
1103	*Consumer attitude items*			
1105	Good meals and drinks are very important for me	**3**	MA 97 EM	MA 99 EM
1106	At my meals, I pay attention to calories	**3**	MA 97 EM	MA 99 EM
25286	*General filter* for weekly magazines*			
25309	Kicker Sportmagazin	**35**	MA 72 / I	MA 00 PM II
25319	Der Spiegel	**35**	MA 72 / I	MA 00 PM II
31700	*Time filter for radio programs*			
31703	Radio Hamburg 103.6	**13**	MA 89 EM	MA 00 EM
31704	Hansawelle Radio Bremen	**29**	MA 72 / I	MA 00 EM
32037	*Time budget*			
32041	Sleeping	**15**	MA 87 EM	MA 00 EM
32043	Personal hygiene / dress	**15**	MA 87 EM	MA 00 EM
32044	Eating / cooking	**15**	MA 87 EM	MA 00 EM

EM = *Elektronische Medien (electronic media)*; PM = *Pressemedien (press media)*.

* *Generalfilter "schon mal gelesen?"* (general filter "ever read?").

Each of the modules of specific and unspecific media use can be analyzed longitudinally. However, as the phrasing of questions and answers changes occasionally, questionnaires and code plans must be examined beforehand.

2.2 Socio demography, attitudes and behaviors, time budget

The *socio-demographic* information comprises gender, age, education, employment status, occupation, net income and family status since 1954 (Akinci, 2005). Over the decade that followed, denomination and household structure (income, number of persons, children) were added. Inevitably, the response alternatives changed occasionally during this time. For example, age, which is indispensable for cohort analyses, was asked in three ways. From 1954 to 1968, interviewees had to choose among age brackets. From 1969 to 2000, age was asked in years. Since 2001, interviewees have been asked to give their birth year. Nevertheless, the enormous sample sizes make it possible to examine changes in the social structure – due to educational expansion, decreasing self-employment, tertiarization – in groups disaggregated according to age, gender or region. In particular, cohort analyses are possible.

Moreover, a few specific consumption-related *attitudes and behaviors* are included in the questions: dietary attitudes, plans to buy durable goods, use of public transport, travel and leisure activities, shopping behavior, ownership of home and garden, possession of household articles and animals. Although some of these items have been introduced only recently, it is possible to analyze the consumption structure, and in part also changes therein. Beyond the domain of consumption, political party preferences were surveyed 19 times between 1978 and 1990. Moreover, the cooperation of the respondent was measured in 50 surveys between 1972 and 2000. With this information, the determinants of the decreasing willingness to cooperate in the interview which plagues survey agencies can be examined in specific groups so that recommendations for future field work can be developed.

Last but not least, the *time budget* module already mentioned in Section 2.1 inquires into time devoted to sleep, personal hygiene, housework, eating / cooking, work, studying, leisure time, commuting, shopping, visiting friends or relatives and going out to bars or restaurants (Klingler / Müller 2004) so that changes in these activities "at home" or "outside the home" can be examined.

3. Published and planned work

Published secondary analyses of the LA or MA comprise four groups. *First,* current *benchmark figures of media use* have been reported annually since 1991 in the AG.MA magazine *"Media Perspektiven"* (Franz / Klingler / Jäger

1991)[2]. Sometimes they are compared between years. For example, Klingler and Müller (2004) follow media use from 2001 to 2004, while Franz, Klingler and Jäger (1991) look at radio use from 1968 to 1990. *Second, specific questions of communication science* have been examined: Kubitschke and Trebbe (1992) developed of a comprehensive typology of the use of all media. Weiß and Hasebrink (1995, 1997) examined the habits of radio listeners in Hamburg. Schönbach, Stürzebecher, Knobloch, Schneider and Peiser (1997) researched how well daily newspapers sell. Lauf (1999) compared newspaper use surveyed by the MA with the Allensbacher advertising analysis (*Allensbacher Werbeträgeranalyse*) and the long-term study on mass communication (*Langzeitstudie Massenkommunikation*). *Third,* aspects of *social change* in the Federal Republic have been described. Wahl (2003) used the leisure activities frequency scale to explore life-style changes. Fachinger (2004) analysed age-specific spending behavior. *Fourth,* the change of *data collection mode* from face-to-face to telephone interviews was described by AG.MA authors (Klingler / Müller 2000) and their socio-demographic determinants have been investigated (Hagenah / Best 2005).

Up to 2002, only a few scientists analyzed the data (Hasebrink 2002, 9) – probably because of the technical hurdles already mentioned in Section 1. Analyses up to now have been facilitated by *"ladatsyn"*, *"madatsyn"* and the SPSS-Files prepared by the MLFZ. Some recent analyses are published in a volume edited by Hagenah and Meulemann (in press).

In the future, the MLFZ plans to facilitate further analyses through data preparation activities. In particular, the LA and MA data which originally were collected for the short-term commercial purpose of establishing an "advertising currency" will be prepared for long-term scientific secondary analyses. In order to achieve this, we will sum up (station or title) specific media uses according to theoretical categories and construct what we call *"goal variable sums"*. The most important categories needed to create these sums are the *legal status* (private or public) of radio and television stations and the *coverage of the medium* (full vs. section programs; high-quality press, "yellow" press, agency newspaper). In addition, the use of all media can be summed up according to *distribution type* and *distribution area* and the use of newspapers according to *political orientation*. In this manner, the multitude of specific programs and titles which constantly change over time is transformed into a small set of constant and theoretically meaningful variables. To give an example, "MA EM 1990" contains general filter information on 26 radio broadcasting stations from "Antenne Bayern" to "WDR 4", and "MA Radio 2000" on 76 stations from "Alster Radio" to "welle fidelitas". These stations can be ordered according to their legal status, so that for

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[2] Since 1997 all abstracts and since 2000 also all articles from the monthly magazine Media Perspektiven can be downloaded: www.ard-werbung.de.

each respondent two constant variables of time use – public and private stations – are established.

It is planned to construct time series of the most important *"goal variable sums"* and to publish them electronically on the MLFZ homepage. Furthermore, it is planned to add *external information* to the data concerning the program patterns broadcasted during the user times surveyed and the political events of the date of the interview. In this manner, opportunities for more far-reaching analyses on the role of media in social change will open up.

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