# Culture-Gates in Music and New Media Arts in Germany 

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## 1. INTRODUCTION

In literature, closed doors are often used as a symbol of personal failure, stagnation, weakness and exclusion, e.g. in Franz Kafka’s «Vor dem Gesetz» (Before the Law). In each case there is a central person, a gate-keeper, who keeps watch at the door and decides who is admitted or not. He/she will take action against any unauthorised person which attempts to pass through, based on a set of objective or subjective rules and laws decided upon from above. While the gate-keeper does not necessarily participate in setting the criteria for who can pass through the door, his/hers mere presence is often an indicator for a deeply rooted system of gate-keeping based on exclusion/inclusion.

If the rules and criteria underlying the gate-keeper's decisions are transparent, we can assume that subjective discrimination will be limited. The level of transparency can only be measured when the effects of their decisions are studied, in other words, determining who passes through the door or gate and whether this is in keeping with the rules and criteria set by the institution.

In this study, we are aiming to bring transparency to the application of the rules and laws pertaining to equal opportunities which have influence over the system of gate-keeping in different fields of culture. Experience has shown us, however, that the implementation and observance of such rules follow different routes than should be expected.

The Culture-gates study is also looking for the proverbial keys which can open doors to professional success and which in particular promote women in the more

[^0]traditional field of music and in the still young interdisciplinary field of new media arts. These fields were chosen because in the traditional structures of the music sector, rigid, male dominated rules were suspected which could obviously hamper the career development and professional achievements of women. The German proverb success has many fathers seems, according to earlier research, particularly relevant in parts of the music field.

In the rapidly developing field of new media arts, the gates were rather open, especially to innovative newcomers and women. This could be seen especially in the early developmental phases of the field some ten to twenty years ago, when women played a leading role and, in fact, outnumbered male video artists. The question is whether this situation has now changed due to the growing institutionalisation and increasing public recognition being garnered by this field. Will it develop in a similar manner to other traditional arts sectors and structures?

## Data and Methodology

In Germany, a wealth of information and data on the situation of women in music education and music professions has been collected by the Centre for Cultural Research. The first study was conducted in $1987^{2}$, updated in $1995^{3}$ and again in $2001{ }^{4}$. These studies provide trend analyses covering the status of women over a period of more than 10 year and can now be used to analyse gate-keeping structures. Additional data has been provided for this study by various institutions which have been created over the last decades to improve public awareness about female musicians (past and present).

However, it would not be reasonable to expect the same level of data for the field of new media arts. The insights provided in this chapter are spotlights that need to be enhanced by further and continuous data collection and monitoring.

Our attention has been concentrated on the various moments in the develop-

[^1]ment of a career where gate-keeping mechanisms are crucial, e.g. being admitted to education institutions, entering professional life for the first time, climbing the ladders of management, obtaining artistic recognition and success through prizes and awards. Data on the share of women and men in the «entrance phase» of a career is used as a benchmark or expected value for the representation of both sexes in subsequent phases. We know that this linear approach is slightly problematic because career paths do not develop in a straight forward manner. The career development of women is particularly characterised by breaks and delays due to family responsibilities. These deviations are mirrored in the data and are taken account of in the evaluation.

## 2. MUSIC

### 2.1 Qualifying for Music Professions

University education in the field of music has been characterised by steadily growing numbers of female students over the last twenty years. During the winter semester of 1988/89, an equal share of men and women was reached for the first time and has more or less been maintained until today.

The positive development in favour of women in the field of conducting is especially significant. The number of female students has more than doubled, their share rose from 19 to $35 \%$ in the last five years. Female shares in subject areas such as orchestra music, church music and jazz/pop music each rose by 7 to $8 \%$ during the same period.

Table 1
Share of Female Music Students at Universities and Academies, Winter Semesters 1993/94 and 2000/01

|  | WS 1993/94 |  |  | WS 2000/01 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Women |  | Total | Women |  |
|  |  | Total | $\% F$ |  | Total | $\% F$ |
| Total | 25,664 | 13,249 | $52 \%$ | 25,455 | 13.894 | $55 \%$ |
| Individual Subjects |  |  |  |  |  |  |
| Music Education | 9,716 | 5,698 | $59 \%$ | 8,931 | 5,471 | $61 \%$ |
| Music Science / History | 6,181 | 2,849 | $46 \%$ | 5,691 | 2,792 | $49 \%$ |
| Conducting | 193 | 37 | $19 \%$ | 263 | 92 | $35 \%$ |
| Singing | 1,094 | 679 | $62 \%$ | 992 | 652 | $66 \%$ |
| Instrumental Music | 5,955 | 3,095 | $52 \%$ | 6,768 | 3,856 | $57 \%$ |
| Orchestra Music | 1,067 | 497 | $47 \%$ | 1,440 | 770 | $54 \%$ |
| Jazz/Pop Music | 402 | 60 | $15 \%$ | 467 | 108 | $23 \%$ |
| Church Music | 607 | 203 | $33 \%$ | 504 | 205 | $41 \%$ |
| Composition | 270 | 57 | $21 \%$ | 261 | 62 | $24 \%$ |
| Sound Engineers | 114 | 15 | $13 \%$ | 106 | 11 | $18 \%$ |
| Rhythm | 65 | 59 | $91 \%$ | 32 | 31 | $97 \%$ |

Source: ZfKf research, based on data from the Federal Office of Statistics
Interestingly, the share of women among foreign students registered in conducting courses is significantly higher than the share of women among German students. In the field of composition, this difference is even more distinct. Out of

261 composition students registered in the 2000/2001 winter semester, the share of women from Germany was $10 \%(\mathrm{n}=143)$, whereas out of 118 composition students from abroad, the share of women was $41 \%$. These figures shed a new light on the data presented in Table 1. We can then question whether women from outside Germany have different role models and socialisation processes which influence their decision to study a certain subject. Or is the decision to study abroad accompanied by an exceptional level of emancipatory ambition which is then supported?

The North Rhine-Westphalia Music Council has supported young composers through annual composers workshops and in this context they are focused on attracting and promoting talented girls. Their impression is that girls are underrepresented in the field of composition due to the image of the composer in Western music history.
«In South Korea, traditionally more women then men compose music. However, the social status of the profession in South Korea is not as high it is in Germany.> ${ }^{5}$

Correlation between the percentage share of women in certain fields and the social status of a profession can be found throughout and has been expressed in the «Pyramids of Success» which the ZfKf invented for selected artistic sectors. The Pyramid visualises the fact that only a few women have access to the top levels of various hierarchies.

Despite the above average share of women on the first level (education), the pyramid shows a typical male dominated distribution of power throughout different artistic sectors. According to the conductor Catherine Rückwardt, «women are not educated to strive towards leading positions.> ${ }^{6}$

The image of the male genius is still present in composing and conducting which obviously does not encourage women to enter such fields. Other sectors of the arts offer a broader range of professional positions and provide motivations for women to pursue in their studies. De-mystifying professional images will be important to reduce the entrance barriers to specific fields. According to Carol J. Crawford, most men and women do not have the ambition to become a second Karajan, but they simply want to develop and to prove their individual capacities ${ }^{7}$. The Länderreferentinnen für Kunst und Kultur von Frauen (state administrators for women in the arts) have drawn up a list of measures to improve the situation of

[^2]6 «Die Jungs teilen sich den Kuchen unter sich auf.» (The Boys Share the Cake Among Themselves). Interview with Catherine Rückwardt conducted by Alexander Ross. In: Crescendo, April/May 1999. Catherine Rückwardt is one of three female general music directors in Germany. She works at the Philharmonic Orchestra of the State Theatre in Mainz.
7 Carol J. Crawford, «Themenbeitrag: Frauen am Pult». In: Fono Forum 8/01, p. 31.
women in music by encouraging them to pursue this educational path despite their socialisation experiences and lack of role models. They demand the encouragement of female students to enrol in composing and conducting courses and for the institutions or academies to offer them the possibility to obtain multiple qualifications ${ }^{8}$. Among other proposals, the Länderreferentinnen want «to make the allocation of funds dependent upon the availability of support programmes for women within the universities». In addition, they demand a systematic approach toward raising the share of female lecturers and professors, more focus on works created by women and systematic integration of the results of gender research into various courses ${ }^{9}$.

### 2.2 Job Perspectives in the Music Sector

### 2.2.1 Professional Situation of Orchestra Musicians ${ }^{10}$

While the number of theatres and orchestras rose sharply in 1990 due to the German unification process, a subsequent wave of adaptation and financial constraints led to the closing, reduction or fusion of institutions especially in the new federal Länder. This not only concerned small orchestras in rural areas but also big orchestras in cities like Berlin, Schwerin, Erfurt, Potsdam and radio orchestras of the former GDR broadcasting company in Berlin and Leipzig. There were also significant structural changes going on in the «old» federal Länder, e.g. North Rhine-Westphalia.

The number of publicly supported concert, opera, chamber and radio orchestras decreased from 168 in 1992, to 139 in the beginning of 2002. Subsequently, the number of job opportunities fell from 12,159 in 1992 to 10,445 in 2002, equal to a reduction of $15 \% .80 \%$ of these losses occurred in the new federal Länder.

Job opportunities for music students look rather grim. According to a study of the Deutsche Orchestervereinigung, only 844 new job opportunities became available due to the retirement of certain staff members between 1998 and 2002 but it

8 Empfehlungskatalog Frauen in der Musik. Positionspapier der Länderreferentinnen für die Kunst und Kultur von Frauen, verabschiedet auf der Sitzung am 23.5.2000, S. 2. (Catalogue of Recommendations on Women in Music, position paper adopted by the staff of the Länderreferentinnen für die Kunst und Kultur von Frauen, 23-05-2000, p. 2).

9 In 1998, the share of female professors in music and music education was 23\% ( $\mathrm{n}=1,451$ ), among the artistic and scientific personnel, there were $35 \%$ women ( $\mathrm{n}=5,794$ ).
10 See interim report of the working Group «Zukunft von Theater und Oper in Deutschland» (The Future of Theatre and Opera in Germany) at http://www.buehnengenossenschaft.de/ theater.pdf.
is not clear whether all these positions will be refilled ${ }^{11}$.
A glance at the figures of graduates from music colleges, universities and colleges shows that the 3,773 graduates of 2000, face very tough competition when applying for a job. Half of these graduated with diplomas in instrumental and orchestra music. In 1980, there were 16 applicants for each job position at an orchestra on average, in 1984 the figure had risen to 36 , in 1990 to 63 . After a peak of 69.5 applicants per position this figure has now settled on a high level of 59 applicants per position in $2000^{12}$.

According to the newest data on recruitment of orchestra members, the share of women among the newly employed developed steadily in spite of narrowing culture-gates (see Graph 1). Subsequently, the share of female orchestra members rose from $26 \%$ in 1999 to $28.5 \%$ in the 2001/2002 concert season.

## Graph 1

\% Share of Women Among Newly Employed Members of German Orchestras ${ }^{13}$


Source: Compiled by ZfKF according to data from Das Orchester. 7.8.93, Das Orchester. 4/2000 and information given by Hartmut Karmeier, Deutsche Orchestervereinigung in a telephone conversation on 24-04-2003.

The 2001 ZfKf study on women in the arts and media predicted that the steady growth of female shares among the newly employed may eventually lead to an equal distribution of men and women in German orchestras. This trend is emphasised by the new figures presented in Table 2. However, a comparison of the

[^3]share of women among the total number of applicants and among those selected shows, at least for the first two periods studied, that there are still discrepancies and a more equal distribution of job positions has not yet been achieved. The exact reasons for deciding more often in favour of male applicants requires additional study, e.g. with respect to the ratio of vacancies to applicants, instrument groups and decision makers involved.

Table 2 Female Applicants vs. Women Employed in German Orchestras

| Concert Season | Positions | Contracts | Applicants | Contracts |
| :--- | :---: | :---: | :---: | :---: |
|  | Total | Total | $\%$ F | $\%$ F |
| 1999/2000 | 141 | 119 | $46.0 \%$ | $37.8 \%$ |
| $2000 / 2001$ | 158 | 127 | $44.7 \%$ | $41.0 \%$ |
| $2001 / 2002$ | 208 | 159 | $45.3 \%$ | $46.5 \%$ |
| Average for $1999-2002$ | 507 | 405 | $45.3 \%$ | $42.2 \%$ |

Source: Data collected by the Deutsche Orchestervereinigung among its members. Compiled by ZfKf according to information given by Hartmut Karmeier, Deutsche Orchestervereinigung in a telephone conversation on 24-04-2003.

The situation in the main orchestras in German cannot be analysed only using the data provided by the German Orchestra Musicians Association (DOV) as it does not indicate the size or status of the orchestras nor the positions to be filled ${ }^{14}$. For example, the share of women in the Berlin Philharmonic Orchestra amounted to $12 \%$ in January 2003. This share is well below the average given by the DOV data, but with a growth rate of $4 \%$ per year, the share of women grew faster in the Berlin Philharmonic than in any other German orchestra.

Ten years ago, Werner Resel, then board member of the Vienna Philharmonic, claimed that «Only a dramatic shortage of young talents could motivate his orchestra to make do with women who make music ...» ${ }^{15}$. Today such statements are regarded as irrelevant. Peter Schmidl, managing director of the Vienna Philharmonic Orchestra pointed out in a recent interview that «two thirds of the members (...) are in favour of having women in the orchestra.» ${ }^{16}$ and in fact, there is no way around women, «if a woman is better, we have to employ her, otherwise we make fools of ourselves.» So far, the problem has not been the readiness to engage women, but the small number of women applying (about 20\%). Asked what

[^4]percentage of women he would like to have ten years from now, Peter Schmidl said, «One quarter of women would be very nice. But looking at the present applications, I don't think there will be more than ten per cent.»

Obviously, this is an attempt to leave the back door open by predicting that one's own targets are not achievable, because there are not enough women to face the challenge. It also shows, however, that even renowned orchestras are under the social pressure of gender main streaming. Whether the wish for more women is really an expression of more openness or a formal statement of political correctness to preserve the status quo will have to be assessed on the basis of the orchestra's future employment strategy to hire women.

The distribution of decision making positions in the orchestras is also an indicator. The DOV data may provide a first impression. Graph 2 shows that women are represented in leading positions in the different instrument groups according to their overall share in the orchestras. However, the data presented here also includes their higher share in second positions, especially among the flutes. Subtracting the share of second positions would probably lead to a different overall picture ${ }^{17}$.

The fact that the share of women in leading positions has grown by two per cent on average since 1999 is a positive development.

## Graph 2

Share of Women in German Orchestras, 1999 and 2002 Concert Seasons ${ }^{18}$


Source: Compiled by ZfKf from data provided by Das Orchester. 4/2000 and according to information given by Hartmut Karmeier, Deutsche Orchestervereinigung on the telephone.

The distribution of positions in the different instrument groups still follows traditional stereotypes. The paths pursued are formed at a very early stage when an instrument is chosen - as reflected in the education data - and continues to job

17 Leading positions strings, flutes ( $27 \%$ women); Strings: 111 female concert masters and 8 deputies; Flutes: 88 female solo flutes and 53 female deputies.
18 See Alfred Rinderspacher, op.cit.
appointments in the orchestras ${ }^{19}$. The analysis of newly employed female orchestra musicians according to instrument groups clearly shows the familiar «typically male» and «typically female» instrument groups.

The comparison of overall applicants to those ultimately employed shows interesting trends. There are several groups of instruments where the share of women in the overall applicants was higher than their share among successful ones. These include cello, oboe, clarinet, bassoon, trombone and trumpet. Surprisingly, this ratio is the other way round in some traditionally male dominated areas where the share of women recruited was higher than their share among the applicants. These instruments include horn, double-bass, kettle-drum and percussion. This trend should be monitored to find out whether it implies a breaking with gender traditions.

New data on the share of women among newly employed orchestra members, broken down by instrument groups will be available in summer 2003. Preliminary information made available to the ZfKf indicates that the share of women among the string instruments will grow at an above average rate while there will be below average growth among the brass instruments. At present, two female trombone players and five female trumpet players are employed among all German orchestras.

## Graph 3

Share of Women Among Overall Applicants and Those Hired for Positions in German Orchestras, Orchestra Season 1997/98 and 1998/99 Broken Down by Instruments ${ }^{20}$


Note: The number of applicants was 16,485 . Out of these, 258 musicians were recruited, equal to $1.5 \%$ of all applicants. Female trombone players were not recruited, and there were no female applicants for the tubas. Source: Compiled by ZfKf from data provided by Das Orchester. 4/2000.

[^5]The share of women among newly employed orchestra musicians has been steadily growing since the 1990s in spite of a general negative trend in the labour market for orchestras. It seems that the worsening labour market situation did not have a negative influence on job opportunities for women. However, the orchestras are still far away from a gender balance as has been achieved among music students since the end of the 1980s.

The worsening labour market situation has led to growing demands for stricter control of the quality of music education and stricter entrance exams. It is assumed that this would lead to a «natural reduction in the number of students» and thus regulate the discrepancies between graduates and positions available. It may be disputable whether this is the right approach, especially as experiences from other labour market segments show that often, false prognoses led to erratic steering attempts that were more often reactions to past trends than far sighted action. In any case, careful monitoring of who the decision makers and gate-keepers are in such selection processes is required.

### 2.2.2 Professional Status of Female Conductors, Choir Leaders and Orchestra Managers

## Women Conductors

The «Archiv Frau und Musik» (Archives for Women and Music), Frankfurt, has compiled a reader on female conductors working across Europe entitled «Women to the Conductor's Podium!». The focus of the study was on 90 artists with practical job experience in orchestra and stage conducting. The reader has recently been published as a book ${ }^{21}$ and is available from the Internet at http: //www.dirigentinnen.de. A publication by Elke Mascha Blankenburg ${ }^{22}$ appeared in March 2003 with information about a two year research project on 500 female conductors world wide. Fifty of them are presented in detail with information on their professional career paths.

Both publications aim at making the achievements of women conductors more visible, to provide examples of female role models and to refute the frequently used argument of decision makers in concert agencies and orchestras that «they

[^6]would like to hire women conductors, but there are none». According to the editors of «Women to the Conductor's Podium!» their study «proves that qualified female conductors are available for practically all fields of music, be it the repertoire of municipal theatres, operetta, musical, opera or avant-garde experimental performances. This holds true especially for the field of contemporary music.> ${ }^{23}$

The authors of this study see a positive development in the representation of women conductors:
«Over the last years, more and more women have chosen conducting as a subject which is proven by this reader. They are increasingly successful in competitions and international courses. At the same time it becomes obvious that the systematic support to young talents bears fruit, e.g. through the Conductors' Forum of the German Music Council or through the nation wide support project «Dirigentinnenforum» of the Orchestra Academy of the «Bergische Symphoniker» in NorthRhine Westphalia.» ${ }^{24}$

Despite the appointment of Simone Young in 2003 as head conductor and main artistic director to one of the most prestigious opera houses in Germany, the Staatsoper in Hamburg, women in leading positions in orchestras are still an exceptional phenomenon. The artists' list of the Association of German Concert Agencies shows that the share of women conductors «went up» to a maximum of one per cent between 1992 and 2000.

Table 3
Leading Artistic Positions in German Orchestras, 1992/93 and 2002/2003 Seasons

|  | $1992 / 93$ |  |  | $2002 / 03$ |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Women | Total | Women |  |  |
|  |  | Total F | $\%$ F |  | Total F | $\% F$ |
| Leading Artistic Positions <br> (Conductors, Rehearsing, Choir Leaders) | 929 | 111 | $12 \%$ | 608 | 117 | $19 \%$ |

Source: ZfKf according to Deutsches Bühnenjahrbuch (German Stage Yearbook), 1993 and 2000.
The share of women in leading artistic positions of orchestras has seen a positive development. The total number of such positions decreased by about one third over the last ten years. In spite of the loss of positions, the total number of women went up, their share rose to $19 \%$. This may partly be due to the fact that part time employ-

[^7]24 Ibid.
ment and single or guest contracts are included in this category and that, in addition to conductors, choir leader and répétiteurs are also included in this group ${ }^{25}$.

## Women Composers

A series of concerts of works by contemporary women composers took place in 2000 for the fourth time. It received support from the North Rhine-Westphalia Ministry of Urban Development and Housing, Culture and Sports. Considering the fact that only about $5 \%$ of North-Rhine Westphalia's composers are women ${ }^{26}$ and trend analyses show that in the future young talents will be $90 \%$ male, the Ministry responsible for training in the arts deemed it necessary to increase public awareness of the achievements of women composers and to decrease the lack of female role models through special programmes for women and for girls.

First results from a study on gender specific differences in the development of creative musical talent conducted by the University of Tübingen seem to indicate that «due to biological processes, women tend to develop the talent for composing more towards the end of adolescence». Should this hypothesis be true, «we should be able to understand better why there are so few female composers. At this time, the career path of many women has already been set; the influence of an environment where being a composer or conductor are rather exotic professions for women has become effective. $>^{27}$

The results of a study on female university teachers for composition seem to be interesting in this context. The empirical research conducted by Reinhold Degenhart and William Osborne traced 16 employed female university professors for composition in Western Europe; four of them were employed in Germany. 12 out of the 18 countries included in the study had no women employed in such positions, neither in a part-time nor in full time position ${ }^{28}$.

[^8]The lack of female role models is also shown by the fact that works by women are still rarely performed by public broadcasting companies.

## Table 4

Share of Women Composers Performed during Concerts of Contemporary Music Organised by the WDR 1990/91 ${ }^{29}$ and 1999/2000 ${ }^{30}$

|  | 1990/91 |  | 1999/2000 |  |
| :--- | :---: | :---: | :---: | :---: |
| Works by: | Total | $\%$ | Total | $\%$ |
| Female Composers | 4 | $6 \%$ | 13 | $19 \%$ |
| Male Composers | 68 | $94 \%$ | 54 | $81 \%$ |
| Total | 72 | $100 \%$ | 67 | $100 \%$ |

Source: Compiled by ZfKf according to the study «Die Situation der Musikerinnen in der BRD» (The Situation of Female Musicians in the FRG) by the Ministry for Education and Science and the programme prospectus of the largest public broadcasting institution in Germany «WDR Konzerte 1999/2000».

The share of female composers performed in concerts of the WDR radio symphony orchestra in 1999/2000 is above average compared to their share of all professional composers. It remains to be seen if this indicates a new trend. Co-operation between the WDR and the LandesMusikRat NRW e.V (Music Council of North-Rhine Westphalia) on projects such as the Music Council for Women and Music, a concert series of female composers in North Rhine-Westphalia and a CD series called «MuSIEca - young female soloists in North-Rhine Westphalia» should continue to help improve the situation.

An analysis of the repertoire performed by six major German symphony orchestras ${ }^{31}$ showed rather sobering results. Only three orchestras performed works by women in 1999/2000, and in 2000/2001 only two orchestras performed a woman's work. The works of female composers were by Clara Schumann and three contemporary female composers who have already made an international name for themselves.

[^9]Table 5 Works Performed by 6 Selected German Orchestras During the Concert Seasons 1999/2000 and 2001/02

|  | $1999 / 2000$ |  |  | 2001/2002 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Works <br> Performed | Male <br> Composers | Female <br> Composers | Works <br> Performed | Male <br> Composers | Female <br> Composers |
| Berliner Philharmo- <br> nisches Orchester | 89 | 41 | 1 a | 78 | 39 | 1 e |
| Gewandhaus-or- <br> chester Leipzig | 126 | 56 | 1 b | 125 | 50 | 0 |
| WDR Sinfonie <br> Orchester Köln | 44 | 42 | 1 c | 44 | 37 | 1 f |
| Münchner Philhar- <br> moniker | 343 | 68 | 1 d | 91 | 54 | 0 |
| Philharmonisches <br> Staatsorchester <br> Hamburg | 54 | 46 | 0 | 31 | 44 | 0 |
| Sächsische Staat- <br> skapelle Dresden | 57 | 0 | 10 | 4 | 0 |  |

Source: Compiled by ZfKF according to Konzert Almanach. Heel-Verlag, Königswinter, 1999 and 2001 and orchestra programme prospectus.
a Augusta Read Thomas (USA), b Clara Schumann, c Sofia Gubaidulina (Russia), d Chaya Czernowin (Israel), e Kaija Saariaho (Finland), f Misato Mochizuki (Japan)

Augusta Read Thomas (born 1964), professor for composition at Northwestern University Chicago, was performed across Germany last year, e.g. in a series of performances by the NDR radio symphony orchestra at Hamburg, Cologne and Frankfurt (2002) and at the festival «Ultra-Schall - Musikfestival für neue Musik Berlin» (Ultra-Sound - Festival for New Music, Berlin, 2002).

Sofia Gubaidulina (born 1931) became widely known in the 1980s. Since then she has received prestigious commissions from renowned festivals and orchestras, and her works have been performed by leading orchestras worldwide. She was awarded a great number of prizes, among them more recently the Praemium Imperiale in Japan, the Sonning Prize in Denmark and the Polar Music Prize in Sweden.

Chaya Czernowin (born 1957), Professor for composition at the University of California, San Diego, was living in Germany for 11 years and wrote the opera «Pnima ... ins innere», commissioned by the Munich biennial which was awarded a prize by the journal «Opernwelt» as the best premier in 2000 as well as receiving the Bavarian Theatre Prize. In January 2003, she was awarded one of most prestigious prizes by the Ernst von Siemens Stiftung.

Kaija Saariaho (born 1952), is this years artistic manager of the SR Festival. She became known to a wider public after the premier of her opera «L'amour de loin» at the Salzburg Festival and after being awarded the highly endowed «Grawemeyer Award» for composition by the University of Loisville.

Misato Mochizuki (born 1969) received first prize for her composition by the Paris National Conservatory in 1995. In the same year, she won the Japan Music Award and, in 2002 she was given the «Audience Award» at the Ars Musica Festival in Brussels.

The figures in Table 5 are also reflected in the very low number of works by women composers which have been published as sound recordings in Germany.

Graph 4 Works by Women Composers Published as Sound Recordings


Source: ZfKf according to Bielefelder Katalog Klassik ${ }^{32}$. 42.000 sound recordings were evaluated.

### 2.2.3 Individual Support Measures and Awards Given to Female Musicians

The importance of support measures such as prizes and grants can not be underestimated. They can be crucial for students making their transition into professional life and have helped to pave the way for future success. Well-endowed and renowned grants and awards are a key to success, and this key still lies predominantly in the hands of men.

Prizes and awards are of special importance in the music field. In 2000, almost one quarter of the 11,400 individual prizes registered in 10 different cultural sectors by the German Handbook of Cultural Awards ${ }^{33}$ were dedicated to the music field.

[^10]A study carried out by the $\mathrm{ZfKf}^{34}$ to compare gendered data from the Handbook of Cultural Awards for the period 1986 to 1994 and 1995 to 2000 shows positive trends for women in the music sector. The share of female award winners rose from $27 \%$ to $39 \%$. Their share in the overall prize money rose from $17 \%$ in the mid 1990s to more than one third in the period 1995-2000.

During the same period, the share of female jurors rose by only 4 points from 18 to $22 \%$. A closer analysis of the juries shows that the share of female jurors is significantly higher in public sector juries, a fact which can clearly be attributed to equal opportunity policies introduced by the Länder and the Federal Government.

Access to grants and prizes is greatly determined by whether they are open to application or are simply given by a jury. The representation of women among those prizes and awards that one has to apply to in comparison to honorary awards, shows very clearly that women have to put much more energy into attracting attention to themselves, whereas men are more probably approached. Simone de Beauvoire's statement that «women who demand nothing are taken by the word: they get nothing» reflects this situation. Women need to be informed about the existing support structures and they have to be motivated to participate. The analysis shows that women are not only disadvantaged in financial terms but they are also systematically ignored by men.

A study entitled Repräsentanz von Frauen in Verbänden und Organisationen des kulturellen Lebens (Representation of Women in Cultural Associations and Organisations), carried out by the German Arts Council ${ }^{35}$, contributes toward the discussion and acceptance of gender balanced juries. About $54 \%$ of the associations involved were in favour of gender balance in juries. However, many marginal remarks show that this still seems to be a sensitive issue. Pros and cons quickly enter the well-known quality discussion.

At the same time, criteria on the basis of which prizes are given and for the assessment of artistic quality have to be critically analysed. The staff of the Länderreferentinnen für die Kunst und Kultur von Frauen requested that support for the different stages of women's careers plays a more important role in awarding grants and prizes ${ }^{36}$. At the moment, the age limit for grants

[^11]and prizes is 30 . This «gate» makes it impossible for many women to apply for individual support after an interruption in their career due to, for example, family responsibilities.

In music, as in other sectors of the arts, special support measures for women have been developed as a reaction to the overwhelming number of men receiving awards ${ }^{37}$. These measures are often regarded as second degree awards or seen as a particular form of gender discrimination, even by the women themselves. Such reservations against «preferential treatment» is unknown to men. Practical experience shows that the disadvantaged position of women can only be counterbalanced by such specific support measures, and therefore women should take advantage of them with greater confidence.

## Mentoring

The transition from university studies to professional life is a difficult phase for most graduates, and many of them are not well prepared for this step. Men often profit from «old boys networks» whose traditional relationships and influences reach different levels of culture, politics and economy. Women in the media field were the first to create networks for themselves. A pilot project in RhinelandPalatinate financed by the Ministry of Education, Women and Youth supports female artists from all sectors to build up a network of female mentors, e.g. the Ada Lovelace project at the University of Koblenz for technical professions or the female mentors project for women politicians in Mainz.

A qualitative research study on the self perception of female networks/ associations by Renate Liepold and Birgit Maria Hack concludes that
«female and male associations are not similar to each other. Belonging to a male association has always been connected with status, influence and power. Besides their political importance they have a symbolic value in their informal structures, rituals, hierarchies, language codes and values. The members of the association continuously support each other.» The researchers asked why women take part in female associations «if neither open rebellion against gender discrimination is on their agenda nor a concept of sisterhood similar to the unquestioned brotherhood in male associations..> ${ }^{38}$

The experiences from Rhineland Palatinate as well as the results of a study sup-

[^12]ported by the Deutsche Forschungsgemeinschaft (DFG) ${ }^{39}$ will provide interesting new points of departure for the development of more gate-opening mechanisms and are therefore anxiously awaited.

Figure 1 Pyramid of Representation for Women in Music in Germany


39 DFG is the central public funding organisation for academic research in Germany.

## 3. NEW MEDIA ARTS

An analysis of the professional, social and economic conditions in the field of new media arts is difficult to conduct due to the interdisciplinary character of this sector which is not covered by the traditional sector specific data. Even among experts, there is no consistent or agreed upon definition of new media art.

According to Monika Fleischmann art works are signified as new media art if they
«are based on digital technologies, i.e. use digital technologies and/or make them the object of investigation. In them, ways of perception associated with media communication are artistically reflected, broken down, changed and expanded. Media art is an established field, even though one which is currently inadequate and rudimentary. (...) Media art is encountered in architecture, design, installation, the visual arts, dance, theatre, music, performance and video.» ${ }^{40}$

Some view the inception of the field dating back to the 1960s when the first works of video art appeared. Peter Zorn goes back further in time, with its roots in experimental film and avant-garde art of the 1920s in Europe ${ }^{41}$. In his view
«a basic technical condition could be that it is art which needs electricity for its production and/or reception, in order not to over-stretch the meaning of the word «medium» by transferring it to all (older) art sectors. In the original Latin sense, the word medium denotes a means to do something or an intermediary element.» ${ }^{42}$

While Monika Fleischmann and Peter Zorn are of the opinion that new media arts is developing towards an independent art form with connections to more traditional sectors, Bernard Elias concludes «that new media arts are not an autonomous art form in the classical sense, but will be part of all sectors of art in the course of the $21^{\text {st }}$ century. ${ }^{43}$

Current practices in education and training represent both positions. On the one hand, there are independent study programmes, institutions, festivals and

[^13]support measures for artists focused on new media arts. On the other hand, new media are more and more integrated into traditional art subjects. The educational background of new media artists is also diverse. Some come from other artistic sectors and use new media as a new instrument in addition to traditional techniques. Others come from an informatics or design background and deal with neighbouring disciplines according to their artistic production. All artists in the new media arts have one thing in common: that they go beyond subject borders and combine different sectors of the arts into a new aesthetic constellation ${ }^{44}$, at the same time building bridges to non-artistic areas like informatics. The borderline between applied art and pure art is more blurred in this sector because new media artists either use their technical skills for «market purposes» or they use technical equipment in the applied arts sector to experiment with the newest developments in media technology which later on find their way into arts universities.

Even though the new generation of media artists has a choice to attend the newly established study programmes for new media arts, it will remain impossible for the next decades to present curricula and job descriptions in a clear cut way. The positioning of works of art on the Internet as the «global village» and the co-operation of media productions that are independent of each other in terms of space and time, creates a diversity which presents difficulties when searching for a common denominator. Nevertheless we want to try to spotlight the education sector and professional fields of media arts from a gender perspective. Spotlights can only throw light to some points while others remain in the dark - this has to be kept in mind when trying to draw general conclusions from such statements.

### 3.1 Education and Training

The Centre for Cultural Research carried out a study on media qualifications for cultural professions in $2002^{45}$. This guide for education and further training gives us an indication on the level of integration of new media and technologies into

[^14]courses at arts and music universities. Most arts universities are still organised according to the traditional art sectors and follow different approaches regarding the integration of multimedia into their curricula. Multimedia and new media arts are not usually seen as independent art forms but as a modern addition to work forms and techniques of the respective core subject.

New media and technologies have been integrated into the curricula of arts universities since the mid 1980s. In 1985, they were already included in the traditional subject courses of $69 \%$ of all arts and music universities, today this figure has risen to $88 \%$.

The number of courses has also risen over the past 15 years. Today, each arts university offers on average 20 courses related to «new media and technologies», whereas in the first data collection (1995) there were only 7 courses on average.

In the 1980s, the curricula covered a broader range than today. Whereas current courses on the development of new media and technologies in general, media aesthetics, media history and media analysis are on top of the list, issues like electronic music, music in the media, video works and communication design were much more common in the mid 1980s.

Traditional arts universities usually deal with «arts and new technologies» on a more theoretical level, whereas the acquisition of practical skills in media technology and informatics is the exception. Contrary to their growing importance in everyday life, online media still play a minor role in arts education. Only few universities offer internet courses for students of art and art education. Exceptions are the course «Arts and Media» at the University of Halle and the courses of Prof. Jean-François Guiton at the Arts University of Bremen. Special courses for arts and arts education students could only be detected at the UdK Berlin and at the department for arts education at the HfKD Halle ${ }^{46}$.

In addition to the courses offered through the curricula of art universities, independent (post graduate) study courses in new media arts have been developing since the beginning of the 1980s. Pilot projects for art work through and with the new media are currently developing and testing new modules and courses in the frame of the programme «Cultural Education in the Media Age» (acronym kubim) initiated by the Bund-Länder Commission for Educational Planning and Research Promotion ${ }^{47}$.

[^15]Gender specific data on students and teachers are available for some of the new media arts courses, which then could be compared to the share of women at arts and music universities in general. However, it is not possible to differentiate the data according to courses that deal with «new media and technologies».

The Arts University Saar has included the focus on New Media Arts in its curriculum for visual arts since its foundation in 1989. Today this course is running under the title «Mixed Media». From 1996 to 2003, 41.3\% of all Visual Arts diploma students were registered for the course «Mixed Media». 75\% of a total of 39 graduates in this subject are women. Two professors out of four are women: Christina Kubisch and Ulrike Rosenbach.

The Kunsthochschule für Medien Köln began offering courses in 1990. Today, about 250 students have registered for the course «Audio-visual Media» which combines the subjects television/film, media design, media arts, aesthetics and media theory. There are about $41 \%$ female students. Valie Export is the only woman (besides six men) holding a lecturers' chair, the scientific and artistic staff consists of three men and one women.

The Staatliche Hochschule für Gestaltung Karlsruhe, which closely co-operates with the ZKM Karlsruhe, has been running a course for media arts since 1992.
«The media arts course basically corresponds to the courses available at art academies and art universities, but concentrates on working with different new media (computers, video, animation). It includes the production of documentaries, especially in the fields of computer animation and simulation. Starting from the traditional art forms, students are familiarised with the new possibilities of artistic expression from the very start to be able to make full use of their potential. Joint projects with other departments provide the opportunity of looking into intersecting areas and to interdisciplinary work. In connection with the subjects aesthetics and media history as theory elements, this provided the first adequate study course for one of the newest developments in contemporary art.» ${ }^{48}$

The number of students has been growing continuously since the course started. 142 students were registered in the 2002 winter semester, $43 \%$ of them were women. All professors and almost the entire scientific and artistic staff were male.

The Institut für zeitbasierte Medien (Institute for Time-based Media) unites all media-related research and teaching at the Berlin Arts University. Its course «Experimental Media Design» offers studies on authorship and practice in the media. It deals with creative work using time-based media (film, video, computer). Students from all faculties and courses at the arts university can apply to this

[^16]course after having gone through their basic study programme and a course in theory and practice of time-based media. In addition to those chosen for the study course, selected master students can take part. The share of female students in this course is above average. Among the selected master students, there are seven women and three men.

Table 6
Students of «Experimental Media Design», Berlin Arts University (udk)

|  | Core Student Body of <br> Experimental Media Design |  |  | Master Students |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Total | \# of female <br> students | \%F | Total | \# of female <br> students |
| WS 98/99 | 11 | 6 | $54.4 \%$ | N/A | N/A |
| SS 99 | 21 | 12 | $57.2 \%$ | N/A | N/A |
| WS 99/2000 | 34 | 20 | $58.8 \%$ | N/A | N/A |
| SS 2000 | 39 | 20 | $51.3 \%$ | N/A | N/A |
| WS 2000/01 | 41 | 23 | $56.1 \%$ | N/A | N/A |
| SS 2001 | 50 | 29 | $58.0 \%$ | 1 | 1 |
| WS 2001/02 | 52 | 31 | $59.6 \%$ | 1 | 1 |
| SS 2002 | 49 | 28 | $57.2 \%$ | 3 | 2 |
| WS 02/03 | 51 | 30 | $58.8 \%$ | 5 | 3 |
| Total | 348 | 199 | 57.1 | 10 | 7 |

Source: Compiled and calculated by the ZfKf according to student data provided by UdK-DVOrg for the respective semesters.
SS $=$ Summer Semester, WS $=$ Winter Semester
There are seven men and three women among the lecturers of experimental media design at the Berlin Arts University. The women are Jutta Brückner (film and video); Barbara Kirchner (PR using audio-visual media) and Maria Vedder (design using picture media). Among the scientific and artistic staff of eleven, there are only two women.

Media arts is the most recent subject field introduced at the Hochschule für Grafik und Buchkunst Leipzig (University of Graphics and Book Art). Founded in the 1990s, this course now includes three classes: media arts, intermedia and the class for interdisciplinary art. According to the university prospectus, this course «does not only aim at adding the new media to the range of traditional media at the university». In addition to the development of individual creative talents and communication skills, the programme aims to support «artistic reflection on a society determined by technology. Thus it is located at the interface of two
dynamic process, the digital media and media arts, the development of which is not yet finished.» Alba D'Urbano and Christin Lahr hold two out of four lecturer's positions, the remaining staff is male. 32 out of a total of 80 students in the media arts course are women. Four of the eight master students are female.

The University of Oldenburg started a post graduate course «media arts» in Winter 2000. It addresses graduates of arts and culture (e.g. for teachers of arts, music or textile design) who want to obtain an additional qualification. «The post graduate course 'media arts' aims at building up interdisciplinary project-oriented qualifications in media arts to improve the opportunities for graduates in arts and media professional fields, e.g. in museums, galleries, musical, multimedia or advertising.> ${ }^{49}$ A maximum of eight students per year are accepted into the course. In the winter semester of 2001/2002, there were two male and three female students, in the following winter semester, there were three men and six women ( $66 \%$ women). All three lecturers are men; in addition there is one media artist from the Edith-Ruß-Haus which is invited as a guest lecturer each semester. The scientific and artistic personnel includes two men and one woman.

In May 2000, the Hochschule für bildende Künste Dresden (University for Visual Arts) started its project class on new media under the directorship of Lutz Dammbeck. Students can enter this class after their basic study of four semesters. At the same time, students or master students from other classes and departments can submit their projects from the areas of new media, video, film, photography or mixed methods for temporary participation in this class. 10 out of the 16 students enrolled are women (62.5\%).

At the Hochschule für Kunst und Design Halle - Burg Giebichenstein students can focus on «Arts and Media» studies in their main courses after having achieved their pre-diploma. The department has its own laboratory and concentrates on two areas: moving images / video and interactive media. Students from other departments are also admitted for introductory courses of two semesters and may use the laboratory for their projects. Five out of six students enrolled during the winter semester 2002/03 were women. The head of the laboratory is Professor Ute Hörner. Her artistic staff member is a man, the workshop is headed by a woman. The course «Mixed Media» has been available at the Kunsthochschule since 1996. From 1996 to 2003, 41.3 of all diploma students registered for the focus on Mixed Media. 75\% of an overall number of 39 graduates in this subject were women.

Interdisciplinary courses are still an exception at traditional arts universities, e.g. the three-year pilot project at the Hochschule für bildende Künste (University of Visual Arts) in Hamburg. The programme is headed by Sabine Busching, professor

[^17]of architecture, in co-operation with Dorothee Daphi and Ute Vorkoeper (project co-ordinators) who come from the field of visual communication ${ }^{50}$.

The data presented so far shows that the new «media arts» courses are closely connected to the visual arts sector. This may seem plausible as the visual media predominate, but in actual fact, electronic media found their way into the music sector much earlier. Computer based production and composition methods were used in arts education as early as the 1970s. The Folkwang Hochschule Essen played an avant-garde role when it established an interdisciplinary institute in 1972, offering electronic composing as one of its subjects. Today, about one third of the 39 students are women, the teaching staff are all male.

Meanwhile more institutes of this kind have been established at other music universities with a range of subjects covering electronic music, composition and computer based sound design.

The Institute for Media and Communication Theory at the Martin-LutherUniversity, Halle is at present running a pilot course called «Authorship \& Multimedia» in the framework of the kubim project. «The course aims at providing students with the means of expression that will be indispensable in the future to communicate complex content on a high aesthetic level. Language and history of the media, their social and political implications, and above all their roots in the arts are the subjects that form the core of the course.» ${ }^{51}$ Five women and four men enrolled for the first pilot course.

The analysis of the data available gives the following picture. In three out of eight media arts courses ${ }^{52}$, the teaching staff is all male, the laboratory for arts and media at the University of Arts and Design at Halle is the only institution headed by a woman. Otherwise, the share of female professors ranges from 25 to $50 \%$. 9 out of a total of 37 or $24.3 \%$ of the professors in the media arts courses described in this chapter are women. 583 students were enrolled in these courses during the winter semester 2002/03, 246 or $42.2 \%$ of them were women. The average share of women among all students was $46.1 \%$ in the winter semester of 2000/01. As shown in the ZfKf studies on women in the arts and media, the share of female students in the arts subjects is above this average ${ }^{53}$.

Table 11 gives an overview of the share of women in media arts courses
$50 \mathrm{http} . / / \mathrm{www} . t r a n s m e d i e n . d e$ or the short description at www.kubim.de. The course is open to teachers and students from all departments.
51 See http://www.medienkomm.uni-halle.de/kubim/konzeption/.
52 The project management of the pilot project transmedien is not included.
53 The average share of women in all arts and media subjects had reached $56 \%$ in 1982/83 and risen to $62 \%$ in 1997/98. See Annette Brinkmann, Andreas Joh. Wiesand, Frauen im Kultur- und Medienbetrieb II, op. cit., p. 22.
compared to non-arts related media technology and computer courses in the winter semester 2000/01. Compared to the rather low share of female students in informatics courses (15\%), their share in applied informatics like computer linguistics (43.8\%) or media informatics ( $25.5 \%$ ) is quite high. Courses in computer linguistics are aimed at communication with computers through natural (spoken or written) language. Media informatics conceptualise and design multimedia applications for digital use, e.g. the Internet, CD ROMs etc.

The subject «New Media» is a newly introduced category that includes a range of different courses, e.g. the course «audio-visual media» at the Kunsthochschule für Medien, Cologne. The data on female students are not based on homogenous definitions and therefore can only serve to indicate certain trends.

Table 7 Students by Main Subjects in Arts Related and Non-arts Related Media and Informatics Courses in Germany

| Subjects | Students Total | \% F |
| :--- | :---: | :---: |
| Applied Art/Design | 13,126 | 59.7 |
| Applied Art | 1,046 | 66.3 |
| Graphic Design / Media Design | 12,080 | 59.1 |
| Visual Art | 4,234 | 58.0 |
| Visual Art / Graphic Art | 3,059 | 57.9 |
| Sculpturing | 460 | 57.6 |
| Painting | 715 | 58.6 |
| Performing Arts/Drama/Direction | 1,288 | 68.8 |
| Film and Television | 2,108 | 44.7 |
| Music* | 25,455 | 54.7 |
| New Media** | 941 | 47.5 |
| Media Technology / Informatics | 14,146 | 17.8 |
| Computer Linguistics | 937 | 43.8 |
| Media Informatics | 3,124 | 25.4 |
| Communication / Information Technology | 7,558 | 8.3 |
| New Communication Technologies | 1,586 | 14.9 |

* For music subjects see table 1.
** According to the information provided by the Federal Statistical Office, this includes audio-visual media and media planning in North Rhine-Westphalia, Electronic Business in Berlin and Media Design in Rhineland-Palatinate. Source: Compiled by ZfKf according to figures provided by the Statistisches Bundesamt, 2002, 28.01.2003.

The average share of female professors at arts and music universities was $23 \%$ in 1998. In the visual arts, which is still the core area of new media arts, their share of $18 \%$ is below average. On the other hand, the share of female professors among
the teaching and research staff for visual arts at arts universities has been growing steadily since $1992^{54}$, when it was as low as $5.7 \%$. Between 1992 and 1998 the number of female professors rose from 13 to 47. By the end of 2001, the number had risen again, although the overall staff was reduced. Their share is now at $20.9 \%{ }^{55}$. We may hypothesise that this higher share is due to the inclusion of additional new media subjects in the overall curriculum, however, the data available is not sufficient to prove this assumption.

Generally, the share of female students in media arts is below average, whether compared to the share of women among the total student population or to the share of women among arts students. The share of female professors is higher in comparison to other arts sectors and about equal to the share of female professors in music and music education.

### 3.2 The Professional Status of Female Media Artists

A good overview of the different aspects of the professional status of female media artists is provided in the article written by Monika Fleischmann and published in the second part of this book. Therefore, it is not our intention to repeat her analysis here. Our focus is rather on the professional profile of the field of media arts in Germany.

Media artists are usually «Jacks of all Trades», especially those belonging to the first generation, who came from different disciplines and created the new field of media arts by teaching themselves or by co-operating with other similar minded artists.

As the «interdisciplinary sector of media arts requires a broad range of knowledge and skills from different areas of design, science, technology, visual arts and architecture» ${ }^{56}$, they are able to work in a variety of fields, a fact which «makes them a bit more independent from traditional support mechanisms than traditional visual artists.> ${ }^{57}$

Like contemporary nomads, they «migrate to where the opportunities for training, production and jobs are. Hundreds of international festivals and events, and

54 See Annette Brinkmann, Andreas Joh. Wiesand, Frauen im Kultur- und Medienbetrieb II, op. cit., p. 25.
55 According to information provided by the Statistisches Bundesamt (Federal Office of Statististics) in the beginning of May 2003.
56 See Monika Fleischmann's article in Part II of this publication.
57 Relevant data on the income situation of media artists or other artists is presently not available in Germany, but there are plans for new research activities in this field which may update the data provided by the Artists' Report carried out by the ZfKf in 1972-75.
to the Internet where they can engage in a very lively exchange.> ${ }^{58}$
Although definitions keep locating media arts in the neighbourhood of visual arts, their working conditions are actually more like those of independent film production companies, architects bureaus or other small enterprises of the culture industries.
«Innovative art forms such as media and digital art, room-filling multimedia installations, interactive environments or internet and software art require entirely new forms of production, presentation and funding. The classical artist's studio is already outdated in terms of the production of media art. Instead artists are dependent on decentralised networks, encompassing film and sound studios, digital editing workstations, internet and the entire framework of the modern information and communications technology.> ${ }^{59}$

There are not even estimated figures on the number of female artists working mainly or partly in media arts. Therefore, the representation of women in this very heterogeneous professional field can only be estimated on the basis of a few samples.

A multitude of directories on new media artists and other related arts professionals are available from the Internet ${ }^{60}$. Usually, artists register themselves. The International Directory of Electronic Arts, for example, includes a total of 132 artists from Germany, among them $21.9 \%$ women. Most of these artists focus on «interactive art», followed by «networking», «animation» and «hypermedia». The share of women registered in the category of «interactive art» is only $12 \%$, in «networking» and «hypermedia» it amounts to $30 \%$.

The data base on media arts experts presented on the website of the MARS Exploratory Media Web at the Fraunhofer Institut is still under construction. At present, it includes 81 entries related to arts, culture, education, science, economics and media. Out of these, 21 are women ( $24.7 \%$ ).

Given the high share of female students, the low representation of women in these directories comes as a surprise. This might be because young talents are still developing, but it may also be due to the fact that women do not make use of this instrument of self-advertising in the same way as men.

It has always been assumed that female shares in the video arts were as high as 35

[^18]59 «New ways of art and new ways of funding». Available at http://www.hartware-projekte.de/ programm/inhalt/fundeng.htm
60 Mention should be made of «cinovid», a database for experimental film and video art, provided by the Werkleitz Gesellschaft (http://cinovid.org). It includes 7,100 works with synopses and keywords, CVs of more than 1,000 artists and more than 13,000 cast \& crew entries. Unfortunately, it is not possible to search this database for gendered information.
to $40 \%{ }^{61}$. We analysed the sales figures of video art works to test this hypothesis.
According to Peter Zorn ${ }^{62}$, the only relevant sales point for video art in Germany today is «235 Media», a company located in Cologne which sells media technology and media arts, especially video and installations.

Table 8
Distribution of Video Art and Installations Through 235 Media, Cologne

|  | Artists Total | $\% \mathrm{~F}$ | Works Total | \%F |
| :--- | :---: | :---: | :---: | :---: |
| Video Art* | 85 | 27.0 | 518 | 25.3 |
| Installations* | 27 | 40.7 | 76 | 60.5 |

Source: Compiled by ZfKf according to the database available at http://www. 235 media.com, accessed mid of May 2003 * Artists groups are not included. There were a total of 50 videos by 20 groups and 27 installations by 5 groups.
** Among the male video artists, Rafael Montanez Ortiz is on top of the list with 56 videos, among the women is Ulrike Rosenbach who offers 24 works through this distribution channel. Bill Seaman is the leading male installation artist with 9 contributions, Ingrid Mwangi has the greatest number of installations works on offer among a total of 11 female installation artists

Based on these figures, our optimistic estimates for the share of women among video artists have to be revised. There remains another important question, namely the share of contemporary female artists represented in today's arts market. We evaluated the catalogue of the international arts fair KUNST KÖLN ${ }^{63}$ to come to a comparison. KUNST KÖLN was founded in 2000 and focuses on Art Brut and contemporary art after 1960. The list of artists includes 972 individual artists. 761 names could be clearly identified as male or female. $20.6 \%$ of these were women represented by a gallery.

Against these figures, we can say that the fields of video art, installations, networking and hypermedia can still be regarded as a domain where female shares range above average.

### 3.2.1 Exhibitions

Media arts productions cover a broad range. While «Net Art» operates exclusively on the Internet and purposefully sticks to distribution and production channels that are free of charge, thus denying itself access to traditional (physical) arts mar-

[^19]kets, the representation of media arts productions that are placed in exhibitions leads to the following conclusion:
«Museums and art institutions have in the last 10 years increasingly opened up to the variety of media art. Large-scale events such as the documenta or international Biennials have been dominated by the presentation of media art to a previously unknown extent. This increasing interest in media art is also reflected through the profiles of public art collections.> ${ }^{64}$

To find out whether women can take advantage of this growing interest in media art and receive more opportunities to show their works to a wider public, the participation of women in selected exhibition was analysed.

Women are to be found mainly at public «analogue» exhibition places that feature media arts works. Some of the exhibitions can serve as an indicator for the development of gender relations in a field that has developed only over the last twenty years and in many respects sees itself in a tradition of social criticism.
http://www.newmedia-arts.org is a trilingual encyclopaedia on new media on the Internet. It contains the collections of new media works housed at the Centre Georges Pompidou, Museum Ludwig and the Centre pour l'image contemporain. 13 out of a total of 75 artists registered are 13 women (17.3\%).
bilder ${ }^{*}$ codes \# 1992-2002 was an exhibition in more than 35 institutions of the arts and culture at the occasion of the $10^{\text {th }}$ anniversary of the <br>internationaler $\backslash$ medien $\backslash k u n s t \backslash p r e i s ~ o f ~ t h e ~ Z K M ~ i n ~ K a r l s r u h e . ~ 30 ~ o u t ~ o f ~ 125 ~ a r t i s t s ~ s e l e c t e d ~ w e r e ~$ women ( $24 \%$ ). This share is rather high, especially when considering the fact that the share of women among the recipients of the main awards was only $17 \%$ and that the participation of women in the ZKM activities tends to be generally low. The ZKM analysed a list of artists who had carried out projects as guest artists or who had otherwise co-operated with the ZKM. Many of these works are available at the ZKM museum. 23 out of the 148 artists were women (15.5\%). The present exhibition of contemporary art at the ZKM Museum of Modern Art includes 59 artists; only 6 of them are women ( $10 \%$ ).

The Edith-Ru $\beta$-Haus at Oldenburg was founded in 2000 and is headed by a female director. It is not meant to be a museum where works of art are stored but a place to discuss and present art in exhibitions, presentations and other events, a place where new ideas are produced and realised in workshops ${ }^{65}$. Its provides a

[^20]grants programme with a rather high share of female recipients (43\%), and quite a number of female artists were granted the opportunity to show their works in individual presentations. In 2000/2001, an exhibition was dedicated to different aspects of Cyberfeminism ${ }^{66}$. Gender specific questions seem to play a rather important role in this relatively young institution. Consequently, the share of female artists in its exhibition is quite high (47.7\%).

The FORO ARTISTICO (Hannover) is exclusively dedicated to international media art and provides exhibition space for video sculptures, interactive video and computer installations, multi media designed sound and light spaces, CD-ROMs and Internet projects. Out of 62 artists $^{67}$ who presented their works over the last ten years, 13 were women (20.9\%).

Every year, the European Media Arts Festival (emaf, Osnabrück) provides an international tour programme for high quality and innovative video and film works. Out of 83 works presented to the public since 1997, 21 were works by women (25\%) ${ }^{68}$.

The First International CAVE ${ }^{T M}$ Festival «Art of Immersion» took place in Bonn in 2002, featuring installations by four groups of internationally renowned media artists. Among them were three women and eight men.
http://www.artist-info.com is a database on contemporary artists set up in 1991 by gallerist and arts trader Thomas Poller in co-operation with museums and galleries. It includes CVs, lists of works and places of exhibition for a total of 1,159 artists. 239 of them are registered under the sector photography and new media. Out of these, 51 or $21.3 \%$ are female artists.

Although the sample is certainly too small to indicate general trends, it seems that the representation of women in media arts is by no means extraordinarily high, but comparable to their presence in visual arts where the share of women has settled to around one quarter since the mid 1980s. Women's representation has not really gone beyond this share, especially in the more prestigious exhibition venues and permanent collections of leading museums, unless there were special exhibitions focussed on women. A look at a few special women-only events gives the impression that here gender questions are tackled in a more self-confident and demanding way than in the music sector. Networks have formed among young media artists who target societal conditions through elements of irony and parody in their work ${ }^{69}$.

66 See ibid., Exhibition «Cyberfem Spirit - Spirit of Data», 01.-12-. 2001 to 13-0.1-.2002.
67 See http://www.foro-artistico.de.
68 See http://www.emaf.de.
69 See e.g.. «100 anti-theses cyberfeminism is not...» available at http://obn.org/cfundef100antithesis.html or Ellen Nonnenmacher, «Capital Training» available at http://www.thing.de/Capital/Kurse/Kurse.htm.

### 3.2.2 Top Management Positions (Festivals, Research Institutions, Museums)

For new art forms like multi media installations across space or interactive environments, media artists depend on support for the realisation of their production to acquire the technical equipment and expertise needed. Besides sponsors from companies there are only a few established institutions in Germany who may be addressed for support to such projects.

A glance at the top management positions in German new media arts institutions shows only few positions held by women. Only 4 out of 22 top positions are held by women (18.2\%); in two cases the decision making positions were equally shared. New media arts festivals are also under the direction of men. Susanne Jaschko, head of the transmediale, is the only woman in this respect.

Table 9
Top Management Positions in Selected New Media Arts Institutions and Associations

| Institution | Top Managers |
| :---: | :---: |
| Ars Digitalis - Kunst \& Medien e.V., Berlin | Jeannot Simmen |
| Edith-Ruß-Haus für Medienkunst, Oldenburg (2000) | Rosanne Altstatt |
| FORO ARTISTICO (1991) Internationales Medienkunstforum Hannover | Axel Bohse |
| Gesellschaft für Aktuelle Kunst e.V., Bremen (1980) | Eva Schmidt |
| hartware medien kunst verein, Dortmund (1996) | Hans D. Christ / Iris Dressler |
| Institut für Computermusik und Elektronische Medien der Folkwang-Hochschule Essen <br> Forschungs-AG «Interaktive Medienbühne NRW» | Dirk Reith <br> Dietrich Hahne |
| Institut für Neue Medien, Frankfurt (1989) | Michael Klein |
| MARS Exploratory Media Lab am Fraunhofer-Institut für Medienkommunikation Schloß Birlinghoven St. Augustin (1997) | Monika Fleischmann |
| Medienhaus Hannover - Institution zur Förderung der Medienkunstaktivitäten in Niedersachsen | Ekkehard Kähne |
| Werkleitz Gesellschaft e.V. - Zentrum für künstlerische Bildmedien Sachsen-Anhalt | Holger Kube Ventura |
| Zentrum für Kunst und Medientechnologie (ZKM), Karlsruhe(1997) ZKM_Medienmuseum ZKM_Museum für Neue Kunst ZKM_Institut für Neue Bildmedien ZKM_Institut für Grundlagenforschung ZKM_Institut für Medien und Wirtschaft ZKM_Institut für Musik und Akustik ZKM_Institut für Netzentwicklung ZKM_Filminstitut | Peter Weibel Barbara Könches Götz Adriani Jeffrey Shaw Hans. H. Diebner Michael Mangold Ludger Brümmer Jürgen Enge Andrei Ujica |

[^21]Table 10
Top Management Positions in Selected New Media Arts Festivals

| Festivals | Top Managers |
| :--- | :---: |
| CYNETart festival, Dresden | Klaus Nicolai |
| European Media Art Festival (EMAF) <br> Osnabrück | Hermann Nöring / Alfred Rotert / Ralf Sausmikat |
| transmediale, Berlin | Andreas Broeckmann (Artistic Director) <br> Susanne Jaschko (Curator and Deputy Director) |
| Werkleitz Biennale, Tornitz | Holger Kube Ventura |

Source: Compiled by ZfKf on the basis of an Internet research (May 2003).

### 3.3 Support to Individual Artists in Video and New Media Arts

A special evaluation of the prizes, awards, grants and project support available for artists who focus on new media was done for the Culture-gates study. Some of the awards that were established around the mid 1980s and early 1990s were at first aimed at artists working with video and experimental film. From the mid 1990s onwards, they were opened up to also include computer based art. In some cases, this change was underlined by a name change; e.g. the «Deutsche Videokunstpreis» (German Video Art Award) changed its name to internationaler\medien\kunst\} preis (international\media arts $\backslash$ award).

Table 11
Prizes, Awards, Grants and Project Support to Women in New Media Arts, 1984-2002

| Award | Founding <br> Year | Total <br> Winners | $\%$ F | Jury Members <br> $2000-2003$ | $\%$ F |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Bremer Videokunst Förderpreis ${ }^{1}$ | 1991 | 25 | 52 | 7 | 29 |
| CYNETart Preis | 1997 | 30 | 20 | 18 | 18 |
| dna- award (Digital New Art Award) | 1998 | 15 | 47 | 5 | 40 |
| Digital Sparks ${ }^{2}$ | 2001 | 7 | 0 | Pre-Jury: 25 <br> Final Jury: 6 | 20 |
| 50 |  |  |  |  |  |
| European Media Artists in Residence <br> Exchange (EMARE) | 1996 | 58 | 40 | N/A | N/A |
| Hermann-Claasen-Preis für Kreative <br> Photographie und Medienkunst ${ }^{3}$ | 1987 | 8 | 25 | 10 | 30 |
| \linternational media\art\award ${ }^{4}$ | 1992 | 604 | 31 | 4 | 25 |
| Internet-Kunstpreis der Saarbrücker <br> Stadtwerke | $1997 / 98$ | 2 | 50 | 4 | 25 |
| Marler Video-Kunst-Preis | 1984 | 12 | 42 | N/A | N/A |


| Marler Video-Installations-Preis | 1998 | 10 | 50 | N/A | N/A |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Marler Medienkunst-Preis | 2002 | N/A | N/A | 7 | 29 |
| Medienkunststipendium im Edith-RußHaus für Medienkunst | 2000/01 | 7 | 43 | 5 | 80 |
| MEDIEN Raum Wettbewerb | 2002 | 2 | 0 |  |  |
| Nam June Paik Award ${ }^{5}$ | 2002 | 2 | 0 | 7 | 29 |
| OLB-Medienkunstpreis für Medieninstallationen (emaf) | 2000 | 3 | 66 | 3 | 66 |
| Projektförderung des Instituts für Neue Medien Frankfurt ${ }^{6}$ | 1990 | 65 | 45 |  |  |
| Siemens Medienkunstpreis ${ }^{7}$ | 1992 | 23 | 30 | 5 | 0 |
| Stipendium der Akademie Solitude in der Sparte Video, Film, Neue Medien | 1992 | 62 | 53 |  |  |
| Stipendium des Landes NRW für Medienkünstlerinnen aus NRW | 2000 | 3 | 100 | 3 | 100 |
| Tourneeprogramm for European Media Art Festivals | 1997 | 83 | 25 |  |  |
| transmediale awards ${ }^{8}$ | 1997 | 23 | 9 | 9 | 33 |
| Videonale Bonn ${ }^{9}$ | 1984 | 20 | 30 | Pre-Jury: 5 <br> Final Jury: 7 | $\begin{array}{r} 40 \\ 43 \\ \hline \end{array}$ |
| Videotanzpreis der SK Stiftung Kultur | 1996 | 5 | 80 | 6 | 50 |
| Werkleitz Projektstipendien | 1999 | 9 | 45 |  |  |
| Werkleitz Award - Produktionspreis für Medienkunstschaffende | 2001 | 4 | 25 | 3 | 33 |
| Werkleitz Biennale ${ }^{10}$ | 1993 | 313 | 32 | 12 | 42 |
| Berlin Senate for Science, Research \& Culture | 1998 | 11 | 100 |  |  |
| TOTAL | $\begin{gathered} 1984- \\ 2002 \end{gathered}$ | 1,406 | 34 | 140 | 34 |

Source: Compiled by ZfKf on the basis of the Handbook of Cultural Awards and Internet research.
Note: Members of artists groups were counted as individuals.

1) $45 \%$ of the female award winners were awarded main prizes, $57 \%$ won support prizes.
2) Award for students' projects from media arts, media design, media informatics. In $2001,47 \%$ of the projects submitted were by women, in 2002 their share was only $19 \%$.
3) Awards given for media art available since 1997.
4) 5 cases could not be attributed to a male or female artist. These cases were taken out of the total number of prizes. $17 \%$ of the main prizes were awarded to women.
5) The award consists of a main and a support prize. 6 artists were pre-selected by a jury for an exhibition at the NRW-Forum, among them were two women.
6) 36 projects were documented at the INM archives on 15-11-2001. the number of artists involved in these projects was evaluated. Artists who had done several projects, were counted several times. 58 artists were involved in the projects, among them $32 \%$ women (state: 13-12-2002).
7) The German-Austrian group Ponton European was not included as its composition changes constantly.
8) Award winners 2000-2002 were evaluated; three groups were not included.
9) Biennales Symposium internationaler Medienkunst mit Preisvergabe und Ausstellung. Only award winners up to 1998 could be included.
10) Award winners of 5 Biennials from the sectors performance, Internet, film/video and visual arts were included in the evaluation.
11) Working grants for media artists under a programme which provides support to female artists.

Table 11 provides information on the share of women among awards winners and on their participation in juries. The average share of female award winners is in line with the results of the ZfKf study In Spite of the Pain - No Gain ${ }^{70}$ which presents results on the overall share of female award winners in all sectors, 19862000. Compared to the share of female award winners in visual arts (38\%) it is well below average.

The picture looks different for the share of women on juries. According to the ZfKf study, the average share of female jurors for all sectors was $38 \%$, which was higher than the average in new media arts. However, there were more women in new media arts juries than in visual arts (30\%) or in music (22\%). Renowned awards like the internationale\medien $\backslash$ kunst $\backslash$ preis show a significantly lower share of female award winners (17\%). The Siemens Medienkunstpreis (Siemens Media Arts Award) which has been given four times, did not have a single women on its high level jury.

Awards for video dance show an especially high share of female award winners. Generally, female shares are higher among support prizes and grants - a phenomenon that can be found in support to artists throughout all sectors.

## Summary

The mere figures do not show a more positive situation for women in new media arts than in the music field. Decision making positions in science, research and media arts institutions are still mainly in the hands of men. According to Verena Kuni, the Internet has become «a place of art that has not only gained importance (or popularity) over the last years, but has also seen, in the course of its gradual institutionalisation, a re-establishment of traditional conceptions of arts and artist, including gender stereotypes.» ${ }^{71}$ Female networks, like for instance «Die Patinnen» (The Godmothers) at the Arts University Cologne ${ }^{72}$ are obviously a much needed strategyto achieve equality and to act as door-openers for young female talents.

[^22]72 See www.gleichstellen.khm.de.


[^0]:    1 Annette Brinkmann is a Senior Researcher at the Centre for Cultural Research (ZfKf), Bonn, Germany. She has been responsible for, among other things, the two past studies on women in arts and media professions in co-operation with Andreas Wiesand, Director of the ZfKf. Annette Brinkmann; Andreas Joh. Wiesand, Frauen im Kultur- und Medienbetrieb II. Fakten zur Berufssituation und Qualifizierung. (Women in the Arts and Media II. Qualification and Professional Outlook). ARCultMedia, Bonn, 1995. Annette Brinkmann; Andreas Joh. Wiesand, Frauen im Kultur- und Medienbetrieb III. Fakten zur Berufssituation und Qualifizierung. (Women in the Arts and Media III. Qualification and Professional Outlook). ARCultMedia, Bonn, 2001. ZfKf staff provided assistance in the preparation of this report which is partly based on research surveys carried out by ZfKf for the Federal Ministry of Education and Research (BMBF).

[^1]:    2 Andreas Wiesand, Karla Fohrbeck, Trixie Trommer, Frauen im Kultur- und Medienbetrieb I. Bonn, 1987.
    3 Annette Brinkmann et al., Frauen im Kultur- und Medienbetrieb II, op. cit.
    4 Annette Brinkmann et al., Frauen im Kultur- und Medienbetrieb III, op. cit.
    Annette Brinkmann, Ingo Brünglinghaus, Susanne Keuchel, Andreas Wiesand. Trotz Fleiß-keinen Preis? Frauen in der individuellen Künstlerförderung 1986-1994. (In Spite of the Pain - No Gain? The Representation of Women Among Prizes Winners 1986-1994). ARCultMedia, Bonn, 1994. Susanne Keuchel, Annette Brinkmann, Andreas Wiesand. Trotz Flei $\beta$ - keinen Preis? Frauen in der individuellen Künstlerförderung II. (In Spite of the Pain - No Gain? The Representation of Women Among Prizes Winners II). ARCultMedia, Bonn, 2001.

[^2]:    5 http://www.sps3.de/lmr/lmrk/lmr_mainframe1.php3?seite=194

[^3]:    11 See Gerald Mertens, «Orchester, Musiktheater, Festivals in Deutschland. Eine Bestandsaufnahme». (Orchestras, Music Theatres, Festivals in Germany. A Stocktaking). In: Das Orchester. Juli/August 2002, p. 24 ff .
    12 See Alfred Rinderspacher, «Zum Thema Nachwuchs. Bewerbungen und Anstellungen in den deutschen Orchestern von der Spielzeit 1996/97 bis 1998/99». (Concerning Young Talents. Applications and Job Contracts at German Orchestras, 1996/97 to 1998/99 concert season). In: Das Orchester. Heft 4. 2000, p. 15.
    13 Cf. ibid.

[^4]:    14 See (among others) Abbie Conant, «Fünf konkrete Vorschläge zur Verbesserung des Status von Frauen in Orchestern». (Five Concrete Suggestions for Improving the Status of Women in Orchestras). Available from the Internet at http://www.klassik.com/de/magazine/magazines/vivavoce/artikel02.htm.
    15 See dpa news of 30-07-1996.
    16 Peter Schmidl, managing director of the Vienna Philharmonic Orchestra on women as orchestra musicians and their chances at this Vienna elite orchestra in an interview with the Austrian online magazine profil. See Stefan Grissemann; Peter Schneeberger, «Sonst machen wir uns lächerlich». (Otherwise we make fools of ourselves). Available at http://www.profil.at. profil 9/03 of February 24, 2003.

[^5]:    19 See Freia Hoffmann, «Musiklernen männlich - weiblich. Fünf Thesen». (Learning Music Male - Female. Five Theses). In: Üben\&Musizieren. Zeitschrift für Musikschule, Studium und Musikpraxis: Gender Studies. Volume 5. Oktober/November 2002, p. 13 f.
    20 See Alfred Rinderspacher, op.cit.

[^6]:    21 Europäischer Dirigentinnenreader. (European Women Conductors Reader). Kassel, Furore Verlag, 2003.

    22 Elke Mascha Blankenburg, Dirigentinnen im 20. Jahrhundert. Portraits von Marin Alsop bis Simone Young. (Female Conductors of the 20th Century. Portraits from Marin Alsop to Simone Young). Europäische Verlags-Anstalt, Hamburg, 2003.

[^7]:    $23 \mathrm{http}: / / w w w . f u r o r e-v e r l a g . d e / d e u t s c h / b u e c h e r / b i o n e u 03 . h t m$.

[^8]:    25 Genossenschaft Deutscher Bühnen-Angehöriger (ed.), Deutsches Bühnenjahrbuch Spielzeit 1993/94. (German Stage Yearbook). Hamburg, 1994, p. 14.
    26 For example the data bank of the German Music Council had registered 473 composers in March 2002, among them were $7 \%$ women.
    27 Marianne Hassler, «Wie ist das aber bei Mädchen? Geschlechtsspezifische Unterschiede in der Entwicklung des kreativen musikalischen Potenzials». (But How Does it Work with Girls? Gender Specific Differences in the Development of Musical Talent) In: Üben\&Musizieren. Zeitschrift für Musikschule, Studium und Musikpraxis: Gender Studies. Volume 5, Oktober/November 2002, p. 29.
    28 Reinhold Degenhart und William Osborne: «Wo sind die Frauen? Eine Studie zu den Kompositionsprofessorinnen Westeuropas mit Vorschlägen zur Verbesserung der internationalen Zusammenarbeit». (Where are the Women? A Study on Female Professors for Composition in Western Europe with Recommendations to Improve International Co-operation) Available at: http://www.klassik.com/de/magazine/magazines/vivavoce/artikel04.htm.

[^9]:    29 Interim Report by Blankenburg, Krieg and Baeumer on a research study commissioned by the Federal Ministry for Education and Science on the situation of female musicians in the Federal Republic of Germany. «Die Situation der Musikerinnen in der BRD», 1991, p. 25. (The Situation of Female Musicians in the FRG).
    30 See WDR, Neue Musik im WDR. Konzerte 1999/2000. Köln, Juni 1999.
    31 Berliner Philharmonie, Gewandhausorchester Leipzig, Kölner Rundfunk Sinfonieorchester, Münchener Philharmoniker, Philharmonisches Staatsorchester Hamburg, Sächsische Staatskapelle Dresden.

[^10]:    32 Vereinigte Motor-Verlage (ed.), Bielefelder Katalog Klassik. Stuttgart, 1999.
    33 Andreas Joh. Wiesand (ed.), Handbuch der Kulturpreise. 4. Vollständig neubearbeitete Ausgabe für den Zeitraum 1995-2000. ARCult Media, Bonn 2001.

[^11]:    34 Susanne Keuchel; Annette Brinkmann; Andreas Joh. Wiesand, Trotz Fleiß - keinen Preis? Frauen in der individuellen Künstlerförderung II. (In Spite of the Pain - No Gain? The Representation of Women Among Award Winners II). Bonn, ARCult Media, 2001.
    35 «Repräsentanz von Frauen in Verbänden und Organisationen des kulturellen Lebens. Eine Studie im Auftrag des Bundesministeriums des Innern». (Representation of Women in Cultural Associations and Oganisations. A Study Commissioned by the Minstry of the Interior). In: Deutscher Kulturrat (Ed.), Frauen in der Kultur. Zwei Untersuchungen des Deutschen Kulturrats. Bonn, 1995.

[^12]:    37 See the overview in: Susanne Keuchel; Annette Brinkmann; Andreas Joh. Wiesand, op. cit., p. 59.
    38 Renate Liepold; Birgit Maria Hack, «Exklusiv für Frauen. Qualitative Untersuchung zum Selbstverständnis von weiblichen Zusammenschlüssen». (For Women Only. Qualitative Research into the Self-perception of female Associations). In: Mediendienst FORSCHUNG. Nr. 647, 16-12-2002.

[^13]:    40 See the contribution by Monika Fleischmann in this report
    41 See Peter Zorn «Entwicklung der Medienkunst in Deutschland». (Development of Media Art in Germany). Available at http://www.werkleitz.de/zkb/dmk.html.
    42 Ibid.
    43 Bernhard Elias, «Die Bedeutung der neuen Technologien in der Hochschulausbildung von Künstlern und Medienschaffenden - Ergebnisse aus fünf spartenspezifischen Gesprächsrunden». (The Importance of New Technologies in Higher Education of Artists and Media Professionals). In: Olaf Zimmermann, Gabriele Schulz (ed.), Kulturelle Bildung in der Wissensgesellschaft. Zukunft der Kulturberufe. (Arts Education in the Knowledge Society. The Future of Cultural Professions). Berlin/Bonn, 2002, p. 154.

[^14]:    44 See for example Anette Selinger, «Bildung in Passagen. Praxen, Strategien und Perspektiven für ästhetische Bildung in der medientechnologischen Gesellschaft». (Education in Passages. Practices, Strategies and Perspectives for Aesthetic Education in a Media Technology Society). In: Gerda Sieben, Ulrich Spormann (ed.), Künste. Medien. Bildung - Entwicklung multimedialer Gestaltungskompetenz. (Arts. Media. Education - Development of Design Competence in Multi Media). Remscheid 2001, S. 83
    45 Susanne Keuchel, Andreas Joh. Wiesand (ed.), Medienqualifikation für Kulturberufe II. Ein Wegweiser für die Aus- und Weiterbildung. (Media Qualifications for Cultural Professions II. A Guide to Education and Training). Bonn, ARCultMedia, 2002. A first stock-taking was undertaken by A.J. Wiesand for the Federal Ministry of Education and Research under the same title in 1998.

[^15]:    46 Kirsa Geiser, «Die Vermittlung des Internets in der Kunstausbildung an bundesdeutschen Kunstakademien und Kunsthochschulen. Erhebung im Rahmen des kubim-Modellvorhabens an der Hochschule für bildende Künste Stuttgart ‘Visuelle Kompetenz im Medienzeitalter'». (Internet in Arts Education at German Arts Academies and Universities. Data Collection for the kubim Pilot Project 'Visual Competence in the Media Age' at the University of Visual Arts Stuttgart.) Available from the archives at http://www.visuelle-kompetenz.de.
    47 Information on the pilot projects is available from http://www.kubim.de.

[^16]:    48 http://solaris.hfg-karlsruhe.de/hfg/inhalt/de/Hochschule/fachbereiche/821.

[^17]:    49 See http://www.uni-oldenburg.de/zsb/interess/studgang/faecher/medienku.html\#profil.

[^18]:    58 Peter Zorn, http://www.werkleitz.de/zkb/dmk.html, p.1.

[^19]:    61 See Annette Brinkmann et al., Frauen im Kultur- und Medienbetrieb III, op. cit., p. 99.
    62 See Peter Zorn: «Entwicklung der Medienkunst in Deutschland» (Development of Media Arts in Germany). Available at http://www.werkleitz.de/zkb/dmk.html.
    63 Artists' list of 08-.03.-2003, available at http://193.99.40.28/wDeutsch/kunstkoeln/.

[^20]:    64 Background information on the international congress concerning the production, presentation and preservation of media arts: 404 Object not found. What remains of media art? from the $19^{\text {th }}$ to $20^{\text {th }}$ of June, 2003 in Dortmund. http://hartware-projekte.de/hintergruende/ausgangslage/index_e.html.
    65 See http://www.edith-russ-haus.de.

[^21]:    Source: Internet Research by ZfKf (May 2003)

[^22]:    70 See Keuchel et al.,; Ohne Flei $\beta$ - keinen Preis, op. cit.
    71 Verena Kuni,: «Ganz automatisch ein Genie? Cyberfeministische Vernetzung und die schöne Kunst, Karriere zu machen» (Automatically a Genius? Cyberfeminist Networking and the Art of Having a Career). In: Sigrid Haase (ed.), Musen Mythen Markt. Jahrbuch VII der Frauenbeauftragten der Hochschule der Künste Berlin, Berlin, 2000.,

