Personal Home Pages on the Web: A Review of Research

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Abstract

Personal or private home pages are Web sites published and maintained by individuals or informal, small groups. The paper presents the personal home page as a new object of sociological, psychological, linguistic, and communication studies research. It shows how theories of identity, self-presentation and computer-mediated communication are being applied to personal home pages. The paper is the first systematic review of about thirty personal home page studies. In order to integrate the diverse empirical findings a communication studies framework is used: Personal home pages are regarded as media products with specific production processes, product characteristics, and reception processes. The paper ends by suggesting some possible directions for future research.

Enhanced Article Feedback

Introduction

Critics complain that personal home pages are often trivial or even tasteless, amateurish and superfluous products of narcissism and exhibitionism (Rothstein, 1996):

*The Web is full of examples of assertive confession: the college sophomore who posted every rock concert he ever attended, or another student chronicling every pop song he has listened to since Dec. 22, 1995. There are resumes, photos of significant others clothed and*
A series of initiatives have selected especially blatant negative examples from the field of both personal and non-personal home pages (e.g. [http://www.worstoftheWeb.com](http://www.worstoftheWeb.com)). Advocates of personal home pages on the other hand refuse to accept the accusation of triviality and tastelessness. They emphasize the emancipatory and self-reflexive potential of autonomous portrayals of individuals in the public space of the Web. In the statement of the “Open Pages” Webring, an alliance of personal diary home pages, the following lofty evalutatins of the variety and richness of personal home pages can be found ([http://www.hedgehog.net/op/](http://www.hedgehog.net/op/)):

> No one’s life is insignificant, no matter where they are, what they do, how old they are… Anyone’s experiences can bring something to our lives – thought, perspective, laughs, tears. With a Webring, you’re not limited to one social realm. You could jump from the nightmare of a divorced attorney in New York to a teen’s ramblings about going to the mall. Without a Webring, you might have only found the attorney’s journal and her links to other journals of other attorneys. Thanks to Open Pages and the Webring concept, and with each individual’s quirks and link crossovers, the range of lives accessible becomes limitless.

The fact that personal home pages published by individuals, among them many children and young people, sometimes seem unprofessional, is not a matter of great concern to home page advocates. Personal home pages are not forced on anyone, but must be actively and selectively downloaded as pull-media. They break with the norms of portrayal (increasingly shaped by commercialization) encountered in the conventional mass media and, in doing so, enhance the spectrum of available media products. Hundreds of awards are handed out for positive examples of personal and non-personal home pages (e.g. [http://Websiteawards.xe.net/](http://Websiteawards.xe.net/)).

Apart from these two contrasting positions, many commentaries about personal home pages are not particularly polarized but rather delve more into the details of home page use. Four examples may illustrate how varied and far-reaching the social implications of personal home pages can be:

- **JenniCam**: In 1996, Jennifer Ringley, then a 20-year-old student, started a personal home page which included poems, an online diary and the legendary JenniCam. Jennicam provides an uncensored nonstop-live video transmission from Ringley’s house in California, where she lives today with six cats, a dog and her boyfriend Dex: “I keep JenniCam alive not because I want to be watched, but because I simply don’t mind being watched. It is more than a bit fascinating to me as an experiment, even (especially?) after five years. So feel free to watch, or not, as you so desire. I am not here to be loved or hated, I am here simply to be me.” ([http://www.jennicam.com](http://www.jennicam.com)). Thousands of Web site-visitors have watched how Ringley “has simply been herself” for years on her home page. Paid membership entitles one to pictures at a rate of one per minute, while the free transmission supplies a new shot every 15 minutes.

- **Jeremy Bamber**: Jeremy Bamber's home page ([http://www.jeremybamber.com](http://www.jeremybamber.com)) has been momentarily taken off line by the provider. The 39-year-old Englishman was sentenced to life in prison 15 years ago for the murders of his mother, her sister and both of his nephews. Bamber, who had always maintained his innocence in court, wanted to appeal to the wider public by presenting his case online. He had also hoped to lend weight to his efforts to appeal. But victim protection organizations protested, not only against the site’s content and layout (it contained, among other

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In many psychology, sociology, linguistics, or communication studies books about the Internet (e.g. Ebo, 1998; Ess, 1996; Gackenbach, 1998; Jones, 1997; Kiesler, 1997; Porter, 1997) personal home pages are, apart from the few exceptions (e.g. Crystal, 2001, p. 198; Wallace, 1999, pp. 31), not discussed, even though the topic is seated at the intersection of lively theoretical discourse on virtualization of the self and practical endeavours to establish one's own presence on the Web. Still, personal home pages have been studied. It is my aim in this paper to give a systematic review of the diverse theoretical and empirical literature on personal home pages, which is in part difficult to access, but nevertheless of considerable volume and quality.

The Personal Home Page as an Object of Research

How is the personal home page defined? Where can personal home pages be sampled? How prevalent are personal home pages?

Definition of the Personal Home Page

A personal home page (personal Web page; private home page) is a Web site published and maintained by an individual who may or may not be affiliated with a larger institution (see Dominick, 1999). The Web design can be undertaken by the individual herself or be delegated to professional Web designers. If rather than an individual a pair of friends, lovers or siblings, a family, or other informal, small groups are responsible for the Web site, the home page belongs to the special form of the collective personal home page. The ownership status of personal home pages can almost always be determined from page titles and headings (e.g. “Home page of Christoph G. Eisenhardt,”“My Home Page,”“Olli’s World,”“Christina’s Corner,”“Sugianto’s Little Palace,”“The Miller Family Home Page”). Those Web sites maintained by organizations, institutions or formal groups (e.g. the home page of the company PepsiCo, the home page of the Internet Society) are to be distinguished from personal home pages.

The ownership status of these “personal” home pages is independent of how private or intimate the contents actually are. If a person’s Web site is restricted to professional activities, then according to the definition suggested here we still have a personal (that is person-related) home page before us. Although the expression personal home “page” is used, not only the start page of the Web site is implied, but rather the entire Web “site”, that is, all of the hyperlinked Web pages published by the individual or informal small group as their own home page.

Sampling of Personal Home Pages

To sample small or large numbers of personal home pages systematically, three search methods are especially efficient:
Personal home pages can be selected from these sources according to various sampling plans in order, for instance, to subject them to content analysis, to contact and survey the home page authors or to present the pages to subjects as stimulus material. In general, qualitative and quantitative content analyses, surveys and experiments as well as logfile-analyses are the most common data collection methods in personal home page research.

**Web Directories**

Diverse Web directories offer separate subdirectories for personal home pages, which are typically classified according to name, geographical region, language or occupation (e.g. Lycos: http://whowhere.lycos.com; Yahoo: http://dir.yahoo.com/Society_and_Culture/People/Personal_Home_Pages/; Web.de: http://dir.Web.de/Private+Homepages/).

**Web Rings**

Some people who run personal home pages join together according to common interests and build Web rings, which can be accessed over a Web ring catalog (e.g. at Yahoo: http://www.webring.com). This is an ideal search method to find home pages of members of specific groups, be they Hindus, wheelchair users, homosexual members of the military, teachers or feminists.

**Link Lists**

References to personal home pages of members of different organizations are often compiled in link lists. This is true of the home pages of university members (e.g. Princeton University: http://www.princeton.edu/usg/home/) or of companies (e.g. Cisco: http://www.employees.org).

**Prevalence of Personal Home Pages**

The Web directory Yahoo lists 32,701 personal home pages in its home page section as of April, 2002, 8% of which are collective home pages run by families (2,172), or informal small groups (351). The German-language directory Web.de lists 51,571 personal home pages in its personal home page section as of April, 2002.

But these statistics of individual Web directories cannot be used to make projections for entire national populations. The large-scale representative surveys on Internet use, which are in the meantime regularly carried out in almost all highly-technologized countries, predominantly focus on the reception of other's Web sites and neglect the creation of the users' own home pages. The 8th GVU Web User Survey (GVU, 1997) showed that almost half (46%) of the $n = 10,109$ self-selected survey participants had already created at least one Web site by themselves. Admittedly, it was not taken into account whether the page they created was a personal home page or was created on behalf of another. In addition, the self-selected respondents of Web-surveys are a subgroup of the Internet population especially active on the net. The Broadband Watch telephone survey of $n = 800$ high-speed Internet service residential subscribers in the United States revealed that 49% of this group, again, one which is especially active on the net, run their own Web sites (SBC Communications, 2001). Upon consideration of the entire Internet population, and not just particularly committed subgroups, it would be an enormous overestimation to assume that approximately every other Internet user maintains her own personal home page:

- **Doll, Peterson and Rudolf (2000)** conducted a written survey of pupils and university students from two German cities (Dresden and Halle) concerning their Internet use. It emerged that in a sample of $n = 440$ high school students (16–17 years old) 9% had constructed their own home page and in a sample of $n = 244$ university students from different fields of study, 11% (Doll, personal communication, July 4, 2000).

- **When Berker (1999)** sent 11,706 students at the University of Frankfurt am Main (Germany) an email-questionnaire, 18% of the 871 respondents (response rate: 7.4%) reported that they had published their own home pages. But when he checked the Web server, he found that there...
Nevertheless, students seem to be the most active group of home-page owners overall: Buten (1996) drew a random sample of 422 personal home pages in Pennsylvania and contacted their owners via email. Seventy-three percent of the 121 respondents were students. More than half of the 319 home pages randomly chosen from the Yahoo directory by Dominick (1999) were owned by students. It is also conspicuous that home page ownership among male Internet users is more prevalent than among female Internet users: In the sample from Buten (1996), 14% of the selected home pages owners were women, in the sample from Miller and Mather (1998), 15%, in the sample from Dominick (1999), 13%. Among the eight universities investigated here (see Table 1), there is also a clear gender difference in favor of men: Although at all of the universities considered here the gender proportion was balanced (about 50% female students), among the home page authors in the USA (27%) and in Germany (13%) there are clearly fewer women.

Table 1 displays the student home page prevalence in four selected universities in Germany and in the USA (as of May, 2000). This exploratory data shows that students at the four US universities, with a large variation, maintain home pages more often (16%) than students at the four German universities (3%). Home page ownership among students has been, up until now, more the exception than the rule.

Theories of Personal Home Pages

The application of theoretical constructs by social scientists interested in studying home pages revolves around the fact that the personal home page involves identity construction and self-presentation issues, via computer-mediated communication.

Identity Theories

While the traditional notion of identity assumes the homogeneity and stability of personal identity (Erikson, 1968), postmodern identity is understood as a patchwork (Kraus, 2000a) or pastiche (Gergen, 1991, p. 150) of independent and partially contradictory sub-identities, which are to be constructed anew in everyday identity work and related to one another to support a sense of coherence (Kraus, 2000a, 2000b). Analogously, the self is also no longer understood today as a homogenous and static entity, but as a dynamic and multiple structure, which is composed of various self-aspects (see Markus & Wurf, 1987). The multiple self has also been theoretically modelled as a dialogical self, in which the individual self-aspects constitute the voices of an inner dialog (Hermans & Kempen, 1993). While the combined self-aspects comprise the entire content related to one's person and the processes acting upon them, with sub-identities only the especially relevant self-aspects are implied (see Döring, 1999, pp. 255). “Identity” is accordingly the more narrow, “self” the broader concept.

Common to concepts such as “patchwork identity,”“narrative identity,”“multiple self,”“dynamic self,” and “dialogical self” is a focus on constructedness, change and diversity. Precisely these aspects are to be found on personal home pages: The home page is always “under construction;” it can be regularly updated to reflect the latest self-conceptions. Also it easily joins diverse disparate and diachronic self-aspects and sub-identities with the internal and external links in its hypertext-structure (Chandler, 1998; Miller & Mather, 1998; Turkle, 1995, p. 259; Wynn & Katz, 1997). No other medium seems more exactly suited than the personal home page to fulfilling the present-day demands of identity work on the charged field of differentiation on the one hand and construction of coherence and meaning on the other:
“Where Web pages are experienced as being emotionally close to their authors as well as physically detached from them, this can facilitate a sense of dialogue with oneself” (Chandler & Roberts-Young, 1998). Personal home page construction promotes the systematic answering of the identity-critical “Who am I?” question and supports the internalization of the individual answers. This is particularly valid in the case of our marginalized sub-identities, which are able to be defined in a self-determined manner on the WWW and to be connected with other self-aspects. Running several fragmented home pages seems to be an exception and not the rule (see Walker, 2000, pp. 111). Representing one's patchwork identity on one personal home page can foster the feeling of self-integration and self-effectiveness (Hevern, 2000; Lillie, 1998; Wynn & Katz, 1997).

As a medium of self-expression and self-construction, the personal home page represents important and potentially beneficial variants of our intrapersonal communication (see Pennebaker, 1997), be it for a limited phase of life (e.g. course of study, pregnancy, coming-out, coping with a trauma) or for an open time horizon.

Self-Presentation Theories

Impression management or self-presentation are often regarded as inauthentic and manipulative practices. But psychological research has revealed that whenever other people are able to observe our behavior directly or to receive information about it, we are careful about what type of impression we leave behind and we actively shape our self-presentation (Leary, 1996; Schlenker, 1980; Schlenker & Weigold, 1992). The general aim of self-presentation as an everyday phenomenon is not to deceive or harm other people but to interact and communicate with them adequately and usefully. To produce useful impressions and to avoid detrimental ones, we employ certain assertive (e.g., self-praise) and defensive (e.g., apologies) techniques of impression management. According to Jones (1990), five main strategies of self-presentation can be distinguished: 1) ingratiation, 2) intimidation, 3) self-promotion, 4) exemplification and 5) supplication. Self-presentation research, which has been decisively influenced by the sociologist Erving Goffman (1959) and his metaphor of dramatic performance in everyday life, emphasizes the prosocial aspects of impression management in terms of fostering friendliness and closeness and avoiding conflicts, embarrassment, shame and anger. In face-to-face-situations people are often restricted or handicapped in their self-presentational behavior, e.g. because they are stereotyped or stigmatized at first glance, because they don't reach relevant audiences, or cannot effectively control their spontaneous verbal or nonverbal reactions.

The personal home page addresses these problems and is especially well suited for an elaborate strategical self-presentation (Chandler, 1998; Karlsson, 1998; Miller, 1995; Wynn & Katz, 1997). One can express oneself extensively and without disturbance, falling back on various modalities and codes. Being represented on the Web with an attractive, information-rich, professional or humorous personal home page may enhance the impression we make on people who are not yet familiar with us personally. The personal home page can also supplement the face-to-face impressions we make on people who actually are familiar with us personally (e.g. friends, colleagues, lovers). Home page owners reach, with relatively little effort, both diverse as well as very small and specialized audiences. A large stage for self-presentation is now available, in principle, to all Web-competent people and not only a selected few media personalities. Personal home pages can be implemented to convey an impression of one's own person and personal identity to certain audiences and addressees (e.g. potential employers, chat friends, colleagues), and to improve contact opportunities and networking (Erickson, 1996). But they can also be public relations work intended for a certain collective identity or marginalized social group to which one belongs (e.g., handicapped people, homosexual people, ethnic minority groups) and whose public image one would like to influence (Hervern, 2000).

As a medium of nearly unrestricted self-presentation, the personal home page supplements our means of
impression management through interpersonal and public relations communication. While impression management in synchronous communication (face-to-face, telephone, chat) can respond with flexibility and nuance to the addressee's reactions, Web authors are confronted with a chronic shortage of information regarding both the composition of their audience as well as the audience's expectations and assessments of the home page (although some have access to log files or employ feedback forms and counters to monitor the activity of visitors to their pages).

Theories of Computer-Mediated Communication

In computer-mediated communication (CMC), spatially separated persons synchronously or asynchronously exchange digital messages (texts, pictures, etc.). Until very recently, computer-mediated communication has been largely text-intensive in practice, so that CMC theories focus on the social consequences of text-based digital communication. Of the multitude of theoretical CMC models, each of which focuses on individual aspects of computer-mediated communication (for an overview see Döring, 1999), it is possible to crystallize two controversies which are especially relevant for personal home pages: First, the question of completeness or incompleteness and secondly, the question of authenticity or inauthenticity of Internet-based self-statements.

The technologically deterministic channel-reduction model assumes that Web-based self-presentation is always perceived in the end as deficient and conveys at best pale and incomplete impressions of real people. But according to the user-centered model of social information processing (Walther, 1992), an elaborate Web site could actually keep pace with a personal encounter in terms of information content, because people are expected to proactively fill information gaps. The theory of hyperpersonal interaction (Walther, 1996) even predicts that with a positive attitude on the side of the recipient, the Web site can surpass other types of self-presentation as an especially rich and evocative source of information.

Processes of impression formation during personal home page visits could be compared to impression formation as it occurs in other forms of personal or mediated encounters (Sherman, End, Kraan, Cole, Martin, & Klausner, 1999; Sherman, End, Kraan, Cole, Campbell, Klausner, & Birchmeier, 2001). This is true not only with respect to the amount of information and/or social presence, but also with respect to authenticity. With computer-mediated communication, control of one's verbal statements is enhanced: We can present ourselves more deliberately, more selectively and, when needed, also more anonymously than in face-to-face-scenarios, and are not placed under intense pressures of confrontation and pressures to act. This can encourage heightened self-disclosure and authenticity on the one hand (e.g. self-outing on one's own home page), but also abet conscious masquerade and deception on the other (e.g. omissions or misrepresentation on one's home page). Indicators for a personal home page's authenticity are both subjective as authenticity assessments of authors and readers (Buten, 1996) and objective as comparisons with other information sources about the person presented.

Where a personal home page positions itself on the dimensions of information completeness and degree of authenticity is not determined by the medium, but rather depends on our motives and competencies in personal home page production and reception processes. There is, however, in theorizing about identity and self-presentation processes in home page construction a tendency to overattribute motives and overestimate competencies.

Findings about Personal Home Pages

About thirty empirical studies on personal home pages can be found in the literature (see Appendix). Most of them refer to the three theoretical perspectives presented above, but only a few of them go beyond description and interpretation to hypotheses-testing. As a systematic literature review has been absent, previous personal home page research is merely cumulative and authors rarely cite each other. To give a
coherent overview of the diverse previous findings it was necessary to structure them according to relevant research questions. In doing so, a communication studies framework was used: Personal home pages are regarded as media products with their specific production processes, product characteristics and reception processes.

Production of Personal Home Pages

Six research questions on the process of producing personal home pages can be answered tentatively based on previous research.

What are the characteristics of personal home page owners?

Home page owners, who constitute a minority of 10% within the Internet population (see the “Prevalence of Personal Home Pages” section) tend to be young, male, students and to possess an above-average level of Internet experience (Berker, 1999; Buten, 1996; GVU, 1998). Belonging to certain occupational fields (e.g. politics, Web design) or identifying oneself strongly as a netizen (see Frindte, Koehler & Schubert, 1998; Walker, 2000) increase the probability that the individual has created a personal home page. Home page engagement in one's own social network as well as participation in online-chat communities are also important predictors of home page construction (Karlsson, 1998, 2000). Despite the popular suspicion of narcissism or exhibitionism (see the “Introduction” section), the 96 randomly selected home page authors at the University of Hannover in Germany (96% men, 4% women, average age: 26 years) didn't differ significantly from the statistical norm on the dimensions of “openness,”“inhibitedness”“social orientation,”“competitiveness,” and “satisfaction with life” of the Freiburg Personality-Inventory, FPI (Albat et al., 1998). (Other FPI scales were not included in the Albat et al. study.)

How intensively are personal home pages maintained?

Ninety-six percent of the 110 home page owners surveyed by Killionan (1998) stated that they have already changed their home page at least once since its inception and also plan further changes. Sixty-eight percent of the respondents in Buten's study (1996) worked on their Web site at least once a month. These indications of intensive home page maintenance are pitted against the findings of Berker (1999) that 26% of the home pages at the University of Frankfurt (Germany) remained completely unchanged over a year, according to the server statistics. Of the 96 randomly selected student home page authors at the University of Hannover, the majority (56%) rarely or never worked on their home page, according to their own accounts, while only a small minority of 7% updated theirs often or very often (Albat et al., 1998). In view of the heterogeneity of the samples and the questionnaires, the findings cannot be aggregated. The wide spectrum of actual home page commitment should be stressed here. Although the frequency of updating did not correlate with the home page’s length of existence (Buten, 1996), a positive correlation was discovered between update frequency and Web site volume (Berker, 1999). Surveys regarding the types of updates were not carried out. At best, which changes were made when can be reconstructed anecdotically on many home pages based upon their “update-history” or “what's new”-section.

How are the form and content of the personal home page created?

Both in connection with their design as well as their content, existing personal home pages are used as templates and material resources: ninety-five percent of the 121 subjects in the Buten (1996) study reported adopting elements from other home pages when constructing their own personal home page. A content analysis of 400 randomly selected personal home pages of students at four US universities revealed that 43% of the sites infringed on copyright laws by using protected images (Herbeck & Hunter, 1998). Apart from such legal implications, a collage-like process of publication is to be read as meaningful...
self-construction in the opinion of postmodern identity theorists (see the “Identity Theories” section). In addition, original creations are also presented in the textual realm, along with copied material both from old and new media (e.g. quotations, sayings, jokes). These textual contributions rest on handed-down bureaucratic, biographical, journalistic and artistic texts and in doing so demonstrate a high degree of identifiability and authenticity when taken as a whole (see the “Theories of Computer-Mediated Communication” section): social-statistic particulars, tabular and narrative CVs, copies of important certificates and work samples, vacation documentations, portraits, wedding photos and photos of children, online diaries, to-do-lists, in/out-lists, self-interviews, poems, stories, and drawings are among the material to be found (Bates & Lu, 1997; Chandler, 1998; Döring, 2001; Karlsson, 1998; Miller, 1995; Miller & Mather, 1998). In addition, the metaphor of the electronic “home” is quite often taken up (Bates & Lu, 1997, pp. 334, Miller, 1999): My bicycle, my car, my computer, my pet, my electric train, my saxophone - such an inventory is exhibited with detailed descriptions and photo documentation. From a linguistic standpoint, those maintaining personal home pages are momentarily participating in the conventionalization of a new genre, by orientating the function and style of their Web sites to each other (Crowston & Williams, 2000; de Saint-Georges, 1988; Dillon & Gushrowski, 2000).

**For which audiences are personal home pages designed?**

The survey study by Buten (1996) found, on the basis of six (not completely selective) addressee categories, that home page owners (at least when surveyed) presume a very heterogeneous audience, which extends from their closest personal environment (friends, family) to acquaintances from the Internet, colleagues from work and people with similar interests all the way to unknown random guests (“surfers”). This variety is reflected in direct addresses to the public on the home page (Döring, 2001, p. 228), although in general members of the owner's own social offline and online networks or of particular related groups are more important addressees than the Internet public in the abstract. The “patchwork-audience” that accesses a personal home page is especially difficult to deal with from the self-presentation perspective and marks a departure from face-to-face contexts, in which we have smaller and more segregated audiences and addressees (see the “Theories of Self-Presentation” section). For instance, the 25 Welsh youths interviewed by Chandler and Roberts-Young (1998) reported that some of them were embarrassed when fellow students or teachers discovered their home pages, which they had actually prepared for their chat-friends. Haase (1999) analyzed 48 home pages of lesbian women, and reported that the female home page authors each had very specific target groups in mind. In over half of the cases (57%), all those interested were invited regardless of gender or sexual orientation. Seventeen percent of the home pages were expressly intended “only for lesbians,” 8% only for women, regardless of whether they were homosexual or heterosexual, and 8% appeared to be addressed only to gays and lesbians. In 2% of the cases lesbians, gays, bisexuals and transsexuals were explicitly welcomed. Only on 8% of the pages did the target group addressed remain vague.

**For what reasons are personal home pages created?**

A number of authors consider motives of intrapersonal and interpersonal communication to be the decisive factors in the construction of a personal home page. Killoran (1999) characterizes personal home pages both as personal projects (motives of self-construction, freedom from outside definition) and social projects (motives of sense of belonging, freedom to make contact). Hevern (2000) stresses that in home page construction motivation involving positive self-construction (Self S-Motive) is articulated just as much as motivation involving making contact with others (Other O-Motive). Befring (1997) takes the need to express oneself (expressionist) and to get to know others (communicationist) as fundamental assumptions. The interpersonal orientation of home pages is also pointed out by Erickson (1996, “social hypertext”), Karlsson (1998, 2000, “socio-textual networks”), Dominick (1999, p. 655: “social association” and “linkage” function) and Groth (1998, 1999: “knowledge net”) and is consistent with that
noncommercial, humane vision of the WWW that Web inventor Tim Berners-Lee (2000, pp. 226) promotes.

The main reason for maintaining a personal home page is not just the furtherance of intrapersonal and interpersonal communication. Just as often, maintenance of a Web page is maintained by a housekeeping motive of being able to access certain Web sites faster using link collections on one's personal home page, or the autodidactic motive of being able to improve one's own Web competence (Buten, 1996). Bates and Lu (1997, p. 333) suspect that just about a third (29%) of the 114 home pages they analyzed are the result of enjoying “play with system capability.” Finally, there are extrinsic motives, amounting to basic task fulfillment, which must also be accounted for (Befring, 1997). Döring (2001, p. 229) found, among others, the following meta-remark on one of the 363 student home pages she investigated:

Well, I do admit that if I didn’t have to, I would never have thought of making a personal home page.... I also don't even want to...especially because I don't know what I should write!!! Oh God, I'm so uncreative again today!! But Prof. Hefele did say that even if you're having a bad day, a landscape architect has to be able to be creative....but that's not helping me any further at the moment! Oh well, to get a first impression of me you can take a look at my wonderful little picture or enjoy my 'tabular' CV!! I also still have a few links and email addresses for you!

Do gender effects exist in personal home page production?

Contrary to the thesis of gender masking or gender switching proposed in connection with “virtual identity” (see Turkle, 1995, p. 210), the creators of personal home pages display a strong willingness to supply authentic and reviewable information about their own person. The overwhelming majority of the home page authors surveyed by Buten (1996) assessed both their own home pages (91%) as well as home pages of others (78%) as reliable, unaltered self-presentations. No other self-aspect is so often and so clearly (through name or photos) presented as gender (Döring, 2001, p. 229). When comparing home pages maintained by women and men, as the content analyses of Befring (1997), Miller and Arnold (2000), Miller and Mather (1998) as well as Dominick (1999) indicate, the familiar gender-specific styles of self-presentation reproduce themselves on the net: Men seem more to emphasize their status, to choose motifs related to technology, to utilize the latest net technology and to express themselves briefly in writing, while women tend to integrate more addresses to the audience, to fall back on floral designs and pastel colors, to opt for a technologically simpler execution and to offer longer biographical narrations.

We should be careful, though, not to make any rash affirmative statements on the basis of exploratory studies. The quantitative content analysis of Dubi, Lauper, Schlapbach and Witschi (1998) found more similarities than differences between men's and women's personal home pages. The qualitative content analyses of Karlsson (1998) and Stern (1999) suggest, on the basis of home pages of female pupils from Sweden and the USA, how subversive gender constructions can be inferred alongside traditional self-presentations of a "nice and kind girl". Kibby (1997) argues that the presence of corporeality on women's personal Web sites does not just make them susceptible to unwanted sexual attention, but can also be a self-determined contribution to sexual identity construction (Stern, 2000). The typical self-presentation dilemma of highly qualified women, namely, the collision of femininity with competence, power and autonomy, is also an issue in home page production processes. Twenty-seven female home page creators working as professors at English and North-American universities interviewed by Miller and Arnold (2001) reported being concerned that their professional status, perceived as structurally
threatened, could further be undermined by private self-presentation on the Web. They did, however, describe the opportunities for self-presentation on the Web as a positive contribution to emancipation, as did the seventeen female home page authors identified as feminists who were surveyed by email by Kennedy (2000). The fifteen women working in the sex industry who were personally interviewed by Podlas (2000) also gave the same account. Their work conditions had clearly improved thanks to their own home pages, not least of all through greater independence from men. Whether and to what extent the online boom of (semi-)professional sex-sites will reinforce or reduce gender-specific victimization in general is still a hot topic of feminist debate (Döring, 2000).

Classification of Personal Home Pages

According to the heterogeneity of personal home page production processes described, above the resulting media products are also fairly diverse. A basic classification of all personal home pages is proposed which can be refined by a subclassification of self-expressive personal home pages.

Basic classification of personal home pages

Before we classify personal home pages according to their identity, self-presentational or communicative functions, we must first take their form of existence (home page not available: “nominal home page” versus home page available: “actual home page”) and their construction status (advance notice of a home page: “projected home page” versus home page with substantial content: “realized home page”) into account. Also the content focus (treatment of one topic without explicit reference to one’s own person, an “instrumental home page” versus making one’s own person the topic, an “expressive home page”) is from the standpoint of identity construction and self-presentation an important classification characteristic.

In a content analysis of 279 student home pages selected from university directories, Döring (2001) found that only 42% of the personal home pages listed in the university directories corresponded to the image of the typical self-presentation page (see illustration 1), that is, a) were accessible, b) offered substantial content and in doing so c) placed one’s own person at the center of focus. In a random selection of 500 home pages from the Yahoo directory, Dominick (1999) found that about 30% (149) were not accessible, and therefore fell in the category of nominal home pages.

Only a minority of 42% of home page owners have well-maintained Web sites which are dedicated to expressive self-presentation. Still the the well-maintained personal home page which is dedicated to expressive self-presentation is repeatedly postulated as the “typical personal home page” in several home page studies (e.g. in de Saint-Georges, 1998; Erickson, 1996; Walker, 2000; Wallace, 1998, p. 33; Wynn & Katz, 1997). Therefore undermaintained personal home pages as well as instrumental personal home pages represent an understudied majority of personal home pages.

Subclassification of self-expressive personal home pages

Expressive personal home pages are not the most common but the most interesting personal home page type when it comes to questions of identity, self-presentation and computer-mediated communication. They need to be subclassified based on several dimensions of home page use:

- **Reason for the construction of the personal home page: intrinsic versus extrinsic home pages.**
  Home pages which arise from intrinsic motivation can be distinguished from extrinsically motivated home pages. Befring (1997) discovered, in a sample of 25 home pages of Norwegian youths, that intrinsically motivated “stray pages” (with sophisticated and individual design) clearly differed from extrinsically motivated “school project pages” (with minimalist and stereotypical construction). Similar differences can also be observed among student home pages, which either come into being of one’s own initiative or have to be laid out within the framework of courses (see the “For what reasons are personal home pages created?” section).
Addressees of the personal home page: intrapersonal versus interpersonal home pages.

Expressive home pages can serve intrapersonal communication in the sense of identity-affirmation as well as be orientated to the influence of or contact with others in the sense of self-presentation. This dual function is not realized to the same extent on all expressive home pages. Home pages can be partially classified as more personal or more social projects (Killoran, 1999), as more expressionist or more communicationist (Befring, 1997) (see the section "For what reasons are personal home pages created?"). Intrapersonal home pages can be completely hermetic by not providing any means of contacting the owner, in the extreme case. On interpersonal home pages, however, interactive components are represented especially strongly: e.g. appeals to make contact via email, guest books, newsboards, chat rooms. Walker (2000, p. 106 ff.) distinguishes between two subtypes of interpersonal home pages according to whether previously known persons from the real environment are the primary addressees (e.g. family, friends, colleagues, former pupils) or whether the page addresses an unknown and wide Internet public. If the addressed home page audience has been primarily recruited from one's face-to-face circle of acquaintances, the virtual self-presentation is only a supplement and refinement (if appropriate) of previously established personal impressions. If, however, an unknown Internet public is addressed, the home page is a place of "first contact" and becomes in terms of self-presentation more meaningful and because of the want of information about the audience at the same time more complicated (see the "Self-Presentation Theories" section).

Themes of the personal home page: Expressive personal home pages can be differentiated according to which and how many self-aspects they select as central themes. Miller (1995) names five thematic focal points: 1. the own person, 2. the own person as as an organization member, 3. the own family, 4. the own interests, 5. the own competencies. A different selection of self-aspects is provided by de Saint-Georges (1998, p. 76) in her definition: "Personal Home page: presentation of the self in digital (hypertextual) form, authored by one individual, and which (i) emphasizes a person (minimally, by a picture or name); and/or (ii) a person's current activities, and/or (iii) professional experience; and/or (iv) displays a person's interests (in the body of the text and/or through hyperlinks to other sites)." It should be noted that identity theories and theories of self (see the "Identity Theories" section) do emphasize the multiplicity of the self, but up to now no conclusive classification of self-aspects has been agreed upon. Corresponding listings suffer from a lack of mutual exclusiveness and often aren't exhaustive, either. Neither Miller (1995) nor de Saint-Georges (1998) name self-aspects which refer to ethnic, religious or sexual identity, although these have been been found on personal home pages (e.g., Hevern, 2000).

Presentational styles of the personal home page: Categorical, relational and narrative forms. Walker (2000) distinguishes three stylistic forms of self-presentation which can be found both alone as well as in hybrids. Categorical home pages supply self-related information through key-word-like self-categorization based upon age, gender, occupation, place of origin, and so on. Relational home pages characterize a person through hyperlinks to Web sites which represent the individual interests, attitudes or hobbies of the author. And finally, narrative home pages group the self-related information into an autobiographical story, which can be, for example, decorated with childhood photos.

Technological characteristics of the personal home page: technologically simple versus sophisticated home pages. As regards the technological expenditure, personal home pages can be fixed on a continuum, on the one side of which a page of pure text is located and on the other side, a complex Web site with multimedia and interactive elements. Technologically sophisticated pages indicate particular personal home page commitment that can be accompanied by playful and autodidactic use of new Internet technologies (see the “For what reasons are personal home pages created?” section) or also may be part of a competence-orientated or gender-specific self-presentation strategy (see Befring, 1997; Dubi et al.,
Designing a useful subclassification system for expressive personal home pages demands further research on transforming the different dimensions into well-defined, mutually exclusive and exhaustive categories.

Reception of Personal Home Pages

Four research questions on reception processes of personal home pages can be answered tentatively based on previous research.

How intensively are personal home pages received?

According to a study of the Benchmark Group (1999), among the 17 most popular French Web sites, which generate more than 10 million page impressions a month, there are a total of four community Web sites, where users can, among other things, anchor their personal home pages. Berker (1999) assessed the protocol data (20.1.-4.2.1998) of the proxy servers of the University of Frankfurt and found that personal home pages had already occupied second place among all Web page downloads of university members with 13% (sex-sites took first place). Personal home pages can become favorite surfing goals if they offer certain services (e.g. archives with erotic stories, software collections, factual and expert information, online diaries etc.). In such cases the construction of a personal impression of the home page owner is no longer a point of focus from the recipient's side, but instead much more a more concrete content-related use. But also for the purpose of social networking and cooperation, there are occasions in both the private and professional realms for seeking out personal home pages, be it to get to know chat acquaintances better (Karlsson, 2000) or to find colleagues working in the same field (see Bly, Cook, Bickmore, Churchill & Sullivan, 1998; Groth, 1998, 1999).

Tauscher and Greenberg (1997) observed the surfing behaviour of n=23 experienced Web users for six weeks and discovered that users visit very few Web pages frequently. Consequently, many Web pages are only visited once (60%) or twice (19%). Of the 23 survey subjects, 18 had their own home page. These home pages were also typically among the Web sites most often visited by the person maintaining them. Only with 2 of the 18 home page creators did the download of one's own home page not make it onto the top 15-list. For 9 personal home page owners, their own site was the page most often downloaded at all, because it was used as a springboard for Web searches over its external links. This finding confirms the statement already made concerning the motives for home page construction, that personal home pages also fulfill other tasks (for instance housekeeping or autodidactic) than the function of self-presentation (see the “For what reasons are personal home pages created?” section).

When, how often and from which computer addresses documents from one's own home page are downloaded can be registered with Web statistics-programs. Making visible the popularity of one's own page in terms of page visits might spur on further home page commitment. Basic statistical information about the home page audience can also be evaluated as part of self-presentation: For instance, if one notices that one's non-English personal home page is often being downloaded from international computer addresses, one might want to think about putting together English-language content. One drawback of many free Web statistics is that one's own page call-ups can't be filtered out and the impression of the popularity of one's own home page can be greatly distorted.

What audience expectations are associated with the genre “personal home page”?

Dillon and Gushrowski (2000) analyzed more than 100 personal home pages with respect to individual elements (e.g. page title, email address, update dates, table of contents, photographs, biographical notes, electronic guest books ecc.). Afterwards they presented the list of elements to a sample of n=57 students, who should decide which of the elements on the list a good home page cannot do without. It was revealed...
that their expectations coincided very well with the frequency distribution found on the actual home pages. The five most important elements are presented in Table 2. Personal home page elements which can only rarely be found on existing home pages and whose availability is often not expected by the home page recipients (e.g., frames, sound-files) are to be differentiated from these genre-defining characteristics.

**Table 2. Core elements of the genre “personal home page” (Dillon & Gushrowski, 2000, p. 203)**

<table>
<thead>
<tr>
<th></th>
<th>Percent of ( n = 100 ) home pages: Realized home page elements</th>
<th>Percent of ( n = 57 ) respondents: Expected elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail links</td>
<td>82</td>
<td>86</td>
</tr>
<tr>
<td>External links</td>
<td>68</td>
<td>72</td>
</tr>
<tr>
<td>Welcome message</td>
<td>67</td>
<td>51</td>
</tr>
<tr>
<td>1–4 graphics</td>
<td>60</td>
<td>52</td>
</tr>
<tr>
<td>Brief bio</td>
<td>56</td>
<td>49</td>
</tr>
</tbody>
</table>

In one experiment Dillon and Gushrowski (2000) checked the validity of the genre-typical characteristics. They presented subjects eight home pages as stimulus material. These home pages could be ordered according to the number of genre-typical (or untypical) elements realized on the page. This objective ordering could be replicated by the subjective judgments of the recipients, who were asked how well they liked the home pages. Where personal home pages play a role in professional life, the exchange of work- and project-related information has become the norm (see Groth, 1998, 1999). Personal home page owners and home page visitors also partially initiate discourses on page design by creators' asking their audience for design suggestions in their welcome message or by home page visitors' pointing out deficiencies or reporting wishes via email or guest book.

**Do impressions based on personal home pages differ from face-to-face impressions?**

Sherman et al. (1999) had thirty subjects assess subsets of 86 authentic personal home pages along four dimensions: 1. general impression of the persona of the home page creator, 2. sympathy, 3. perceived similarity and 4. completeness of impression. For purposes of comparison, the same subjects then assessed someone they knew well and were very familiar with, and someone they knew as a casual acquaintance, along the same four scales. Results indicated that impressions based on the personal home page visit didn't in general differ significantly from impressions based on casual face-to-face contacts, but did lag behind the positive impressions of familiar persons. Sherman et al. (1999) interpreted these findings as undercutting both the channel-reduction model and the model of hyperpersonal interaction. In fact, the results can be interpreted as a validation of the model of social information processing (see the “Theories of Computer-Mediated Communication” section).

**Do impressions based on personal home pages differ from the expectations of the home page owners?**

Independent of whether people present themselves face-to-face or on a personal home page, they overestimate the favorability of the impression they make on others. In the home page situation, however,
this discrepancy is clearly larger: Home page creators particularly overestimate how congenial and how similar they are perceived to be by home page visitors (Sherman et al., 1999; Sherman et al., 2001). The lack of direct (and possibly negative) feedback may lead, in the personal home page scenario, to a stronger positivity-bias serving to protect self-esteem. In addition, the one-sided self-disclosure typical of personal home page communication could play a role (see Wynn & Katz, 1997): When home page owners reveal something private about themselves, they imagine attentive and well-disposed addressees. And even this is not completely illusory, for the WWW is a pull-medium. As a consequence, one can overwhelmingly count on interested home page visitors who express themselves in electronic guest books and emails supportingly and with respect, thereby reinforcing the intended identity construction (see Hevern, 2000, Kennedy, 2000). This form of self-selection of the audience disappears when in an experimental study personal home pages are presented which the subjects otherwise wouldn't have visited. Dominick (1999) showed through a content analysis that just about two thirds of the home page authors wanted to have a congenial effect (ingratiation), while almost a third were primarily concerned with conveying a competent impression (self-promotion). Other strategies of self-presentation (see the “Self-Presentation Theories” section), such as striving to be a role model (exemplification), were observed in less than 10% of the home page sample. These personal impressions composed by the external coders could be contrasted with the home page creators' goals of self-presentation.

Conclusions

The personal home page is a very heterogeneous media product: The volume of personal home pages varies between one document and hundreds of files, the number of external links ranges from zero to more than a thousand, the spectrum of functions and topics, of text types and language styles is large and has been only partially studied. Not less complex than the home page characteristics are production and reception processes involving different types of home page owners and home page visitors. It seems promising to further elaborate the research questions that are posed but only incompletely answered by previous research. Additionally, future personal home page research could look at some issues that have been neglected so far.

Expansion of Focus and Ethical Matters

"Ultimately, it seems that what matters for a page to be a personal home page is that we recognize it as having been authored by one particular individual with no other purpose than presenting one's interest and persona" (de Saint-Georges, 1998, p. 77). Such a narrow definition of the personal home page use reflects the psychological bias of a couple of personal home page studies. When observing home page contents, the home page construction motives and the visiting pattern, it becomes apparent that explicit self-presentation is not the only and quite often not even the most important personal home page function (see the “For what reasons are personal home pages created?” section). Home page research that wants to free itself from psychologism must increasingly embrace economic, housekeeping, political, legal, artistic and autodidactic aspects in an expanded focus.

Ethical issues have also been neglected as an area of research. If parents maintain public home pages about their children, the children may be subject to the ridicule of their classmates. If journalists feature personal home pages on television, unwanted notoreity may develop. If social scientists decline to collect names and sources in connection with personal home page analyses in the interests of preserving an anonymous data record, copyrights may be infringed. A discourse on necessary restrictions on personal home page use for home page authors, home page readers, Webspace providers, journalists and scientists is in order.

Evaluation and Training
The specific difficulties of Web-based self-presentation and public relations work which are theoretically explainable and empirically verifiable suggest a heightened need for evaluation and training. This concerns strategies of individual home page construction in the professional and private areas as well as organizational decisions about personal home page templates or guidelines, which are put forward by companies or online communities. Commercial Web developers who create personal home pages for politicians, athletes or actors should also be interested in an empirical evaluation of their work that includes assessments by home page visitors. Further experimental studies on impression formation and impression change processes based on personal home page reception would be recommended.

Meta-Reflections and Existential Concerns

"I guess that the best - and fastest - way to really get to know me is by discovering what I like. So here goes … I love to bla bla bla… (to be added later)". Self-irony is a common stylistic device found on personal home pages. While Rubio (1996) rejects this practice from a Marxist standpoint as postmodern vanity, Killoran (2000) discovers subversive potential in parodying the methods of self-marketing on the commercialized WWW.

In the explicit meta-reflections found on many home pages, not only is the relationship to the self reflected upon, but also to the Internet and its audiences (see Berker, 1999). So Laura Elizabeth Back, a student from Stanford University, addresses four different audiences on her home page (http://www.stanford.edu/~leback):

Like many personal home pages, this one has no clear reason for existing. Presumably you are reading it because
(a) You're bored, and want to be entertained.
(b) You know me, and are curious what I'm doing with my Web page these days.
(c) You mistakenly clicked the wrong link.
(d) You're actually looking for information about me.

For those who are here for reason (a), I have included a list of links to sites that are likely to be more entertaining than mine. I refer anyone who arrived here for reason (c) to their browser’s “back” command. Reason (b) people should email me—if you're in the area, we should have lunch. That leaves the ones who actually want to know something about me. This would be much easier if I knew what sort of things one might want to know, but since I don't, I'll just cover the highlights. I'm currently a master's student in the Computer Science Department at Stanford University. […]

As the home page-community continually grows and ages, the existential character of virtual representations of the self is becoming more apparent. “A home in cyberspace that can live on forever” was one of Timothy Leary's last wishes. He died at home at the age of 76 on May 31, 1996 in the presence of his friends. His personal home page (http://www.leary.com), on which he enthusiastically worked for several years, remains open to visitors to this day.

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