Visible Language

36.1

Visual Design of Interactive Software for Older Adults: Preventing Drug Interactions in Older Adults

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Abstract

This article reports findings from formative research conducted with older adults to identify desirable visual interface features for an interactive, educational software program designed for an older population. The features discussed address age-related visual and physical impairments common in older people. Findings include recommendations concerning illustration style and representation of the human figure, type size, face, and configuration of type, color relationships and basic interactive functions.

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■ Introduction

Preventing Drug Interactions in Older Adults is a study to determine whether an interactive, animated, software program, designed for the needs of older adults, can increase knowledge gains and subsequent health behavioral changes in a representative population of persons aged sixty years and older. An additional goal of the study is to identify and describe features of an interface design that may increase older user's comprehension and enjoyment of the program's content. This article discusses findings from a qualitative prestudy that informed design of the software program now being tested in a clinical trial.

■ Research Objectives and Problem Scope

Before discussing specific findings from the prestudy, it may be useful to position them in the context of the larger project. The purpose of the study is to develop an effective intervention for reducing harmful interactions among prescription and over-the-counter (OTC) drugs and alcohol in older adults living independently in their communities. The intervention has older adults use the educational software program on laptop computers equipped with infrared sensitive touch screens. Participants do not need to have prior experience with, or knowledge of, computers to use the program. The study is a scientific investigation that compares self-reported knowledge and behavioral outcomes for an intervention group with two control groups who do not use the computer program. It is an assumption of the study that in order for the findings to be valid, the interface must be designed to appeal to, and be broadly appropriate for, the learning styles and psychomotor skills of older adults.

■ Scope of the problem

People over sixty are particularly vulnerable to injury from interactions among pharmaceuticals and other common substances. Members of this age group are likely to use multiple prescription medications for chronic conditions such as high blood pressure and heart disease, and their drug metabolism rates are more variable than for members of the general population. They are also less able to hear, read and understand oral and written instructions (Bloom, et. al., 1993; Hanlon, et. al., 1992; Pollow et. al., 1994; Salzman 1995; Wallsten, et. al., 1995). Adverse drug reactions account for about seventeen percent of hospital admissions for the elderly, which is a rate almost six times greater than for the general population (USGAO, 1995). Failing to take medications properly is estimated to cost the health care system $25 billion annually, and results in ten percent of nursing home admissions costing $5 billion a year (Task Force for Compliance, 1994). In addition, drug interactions rank between the 4th to 6th leading cause of death in persons sixty-five and older (Lazarou, Pomeranz and Corey, 1998).

Study population

The study population for the project was defined as adults at least sixty years of age by self report who met criteria developed and validated by the MacArthur Research Program in Successful Aging to ensure a base-level of independent physical and cognitive functioning (Wallsten, et.al., 1995). In order to qualify for the study participants needed to be living independently in their communities and had to have visual acuity of at least 20/100 with corrective lenses. Participants also had to have health conditions that required prescription drug regimens addressed in the program (e.g., they must either use anticoagulants regularly to reduce stroke risk or antihypertensives to control high blood pressure).

Phases of the study

Preventing Drug Interactions in Older Adults is a study in two phases. During Phase 1, the Pilot Year, the educational software program was developed using formative research with small groups of older adults who met the defined criteria. Findings from this research make up the body of this paper. The program was then tested in a pilot study with sixty subjects representative of the study population (1). Results from the pilot test are reported in Neafsey, Strickler, Shellman and Padula (2001). Phase 2, is a full clinical trial of the completed program with three-hundred subjects in three Connecticut communities. Method for the study and preliminary results from the extended clinical trial are reported in Neafsey, Strickler, Shellman and Cartier (In press). The three-year clinical trial is still underway at this writing.

Formative research method

The main objective for the formative pre-study was to identify specific visual, stylistic, verbal, temporal and navigational features of alternative software prototypes, that either promoted, (or detracted from), user appeal and comprehension of program content.

Two focus groups of six volunteers each (three men and nine women) met once a week over nine weeks to evaluate alternative components of progressively more completed prototypes. Focus group participants were recruited from the Center for Learning in Retirement (CLIR), an ongoing program of lectures, seminars and workshops at the University of Connecticut that is attended by over 300 older adults from the surrounding community. Ages of the participants ranged from 62 to 87, with a mean age of 77. Participants met all of the study criteria for subjects in the larger study as described above and in Neafsey et al. (2001). (Each of the focus group members was given a $5.00 cash incentive award for each meeting attended.)

The nine focus group sessions, which met for one hour each, alternated weekly between sessions devoted to visual features of software prototypes, and sessions devoted to the language level of the text. The sessions devoted to language were used to identify vocabulary that participants found difficult to understand. Older adults have been found to comprehend health information at a full four years below their reading grade level of non-technical prose (Williams et al, 1995). We followed recommendations that the health information be provided at no more than a 6th grade reading level (Laubach and Koschnick, 1977; Plimpton and Root, 1994; Williams et al., 1995), and explored particular vocabulary and descriptions of pharmacological processes with participants to arrive at a final text for the printed materials and interactive program. During these sessions participants also evaluated learner prompts and questions embedded in the interactive quizzes that followed each section to reinforce learning. Method for the language sessions is reported in Neafsey et al. (2001).

■ Qualitative study method

The visual sessions employed focus group methodology within an early product-testing environment. The purpose of the sessions was not to observe, or to "test" participant's use of completed prototypes, but rather to elicit social dialogue from the group about particular visual and stylistic features of alternative prototypes prior to designing the program. Little has been written to date about older adults' aesthetic preferences for visual presentation of information. This study is a preliminary effort to address this gap in the literature.

Group interviewing uses the principle that people who don't know each other, but who recognize that they have things in common with others present, will often enjoy sharing their thoughts and experiences about a topic (Krueger, 1993). Although a focus group setting is an inherently artificial environment, a discussion among peers about shared problems can evolve toward themes that are relevant to the participants without overt direction by a researcher (Morgan, 1988). Since the study area was new to us, we wanted the older adults to define their needs and wants from their own perspectives.

The focus groups met in a CLIR seminar room to evaluate elements of software prototypes. The focus group methods of Anderson and colleagues (1996) and Krueger (1993) were adapted to a computer product environment. For the visual sessions participants sat in a semi-circle around a 17-inch Macintosh full-screen display as prototypes were brought up on the screen for discussion. Since the participant's distance from the screen was greater in the sessions than would be the case in actual use, the screen presentation during these presentations was larger to compensate. (The final image size for the program was 12 inches on 14-inch IBM Thinkpad laptop computers, with 1 inch of perimeter space lost to the touch screen attachment.) Final alterations were made to the software program based on observations of 30 subjects who used two completed, fully interactive sections of it during the pilot test and prior to its use in the clinical trial.

Creation of Prototypes

Before designing prototypes for the discussion sessions, the research and design teams reviewed the literature on age-related losses of visual and physical function in older adults associated with reading and computer use. Information was available regarding age-related losses in ability to read printed texts (Morrell and Echt, 1997; Vanderplas and Vanderplas, 1980). However, somewhat less is available regarding older adults' ability to read, and to learn from, computer screens (Morris, 1994). Specific literature on older adults' stylistic and aesthetic preferences for learning software was not found (3).

Given the information available, the design team assumed that a loss of visual acuity would be present among participants. However, we also made a conscious effort to suspend our prior judgments about the capabilities and preferences of older adults with respect to computer use. This user population was new to us, and little work has been documented in this area, especially regarding seniors' aesthetic preferences. We also assumed that any prototypes we created would reflect the aesthetic orientations of our own design educations and experiences, and considered that these might differ from preferences expressed by the study population (4).

In order to address these potential sources of bias in our process, we developed three initial alternative prototypes with different stylistic features. Our objective was to encourage a "compare-and-contrast" discussion environment in the sessions that would require participants to move beyond simple affirmations of work shown (5). By presenting two or more options for particular visual features, we created a situation in which participants would need to articulate specific reasons for preferring one style or device over another. This approach differs from product testing environments where only one completed mock-up of a design is presented to participants for use and comment. We also chose to introduce the program in gradually more comprehensive states, beginning initially with only still images from the animations. This allowed us to isolate elements participants disliked or found problematic prior to testing completed, and therefore more difficult to criticize, prototypes.

In the first session three still screens from the alternative designs were presented for discussion *(figures a-c)*. Questions for this session concerned general aesthetics and legibility of the images. Matters such as liking or disliking of the illustration style, the gender and race of the human figure, completeness of the organ set and preferences for color scheme, as well as practical matters such as size and type face of text blocks were discussed. The images were introduced one at a time, each being discussed to a natural conclusion before another was introduced. The moderator opened discussion of each new prototype with a general request for comments on the appearance of the image before asking planned questions. The purpose of this approach was to record first responses and issues raised from participant's points of view before directing the group's attention to specific features. Once all three prototypes had been presented, the conversation flowed naturally toward a compare-and

-contrast discussion as participants referred back to prior images. Conversations were driven by participant-led themes as much as possible, with the moderator prompting for pre-set questions only when spontaneous dialogue flagged.

In the second visual session a fourth prototype design was presented that had been created based on comments from the first session. The first three designs were animated for this session, as was the new design (again, with clear differences in animation features among the prototypes). In this session matters such as arrangement of headings, images, and text blocks on the screen, as well as the rate and manner in which kinetic texts appeared on the screen were discussed. Stylistic factors were reviewed and a direction for the final look of the program was established.

In the last three visual sessions alternate versions of animations of different pharmacological processes (and/or interactions) were shown to determine whether participants could easily comprehend the ideas being illustrated. All animations in the later sessions featured the visual prototype style preferred in the first sessions. Preferences for cueing, speed, emphasis and animation devices such as circling body parts under discussion before zooming to enlargements of internal organs were discussed.

Our decision to alternate the meetings between language sessions and visual sessions had two beneficial effects. First, it permitted two weeks time between visual sessions for the design team to develop new prototypes. Second, it provided momentum for the participants who had committed to attend weekly meetings, but it broke the monotony of either type of session. The participants found the verbal sessions to be more tiring and made statements to the effect that they looked forward to the sessions where they could "see movies." Participant interest in the computer program was high and we observed no change in the quality of participation from the first to the last session.

■ Focus group discussion environment

Moderator neutrality

Prototypes were presented to participants in as neutral and equivalent a manner as possible. Although the moderator was a member of the design team, references were made only to "the people who are designing this" in order to disassociate the images from the moderator (Sless, 1996). Although participants were assured that no one's feelings could be hurt, some did express concern about hurting feelings early in the sessions. Participants were encouraged to regard all thoughts, whether positive or negative, as important for the study. We assumed that there would be a tendency among participants to say polite things, and/or to say what might be perceived to be the "right" thing (Morgan, 1988). However, in addition to this effect, which was present, a great many useful criticisms were made, and participants were able to express clear dislike for particular features.

■ Prompting

Comments made in focus group environments have to be evaluated with regard to the context in which statements are made (Albrecht, Johnson, and Walther, 1993). Whether a comment is offered spontaneously, or has to be prompted by the moderator, is important for understanding its meaning. Comments made without prompting tend to indicate that a matter is salient, (is important to the participant and comes readily to mind), but also that it is not particularly sensitive. An issue that must be prompted can either be interpreted as being less important to the participants, (it doesn't occur to them to comment on it), or, it may be a topic that they are uncomfortable discussing in a group setting.

■ Focus group analysis

All statements made in a focus group environment need to be interpreted within the framework of the entire conversation. Interpreting motivations behind comments is subjective and can be a source of error, although context can provide guidance for assessing the significance of utterances. While some responses are obviously richer in detail than others, any single comment can only be assumed to represent the view of one individual. Furthermore, any response must be assumed to represent, at least in part, what an individual wants others in the group to think he or she believes, not necessarily what he or she actually believes (Morgan, 1988). One or two talkative individuals can also dominate a focus group and this was the case for both groups in the study. The principle speaker in each group was identified in the transcripts as Participant #1.

■ Findings

Despite the limitations of what can be firmly asserted from focus group research, the sessions provided insight into a number of matters related to participant's responses to the computer program. Participants spoke openly and matter-of-factly about age-related issues such as diminished eyesight. They communicated their likes and dislikes for aspects of graphic style clearly, once prompted. They also talked about their existing beliefs regarding interactions between prescription and over-the-counter medications and alcohol. These comments were useful for identifying present misconceptions.

What follows is a discussion of the design features of the PEP (Personal Education Program) that evolved in response to the participants' comments and preferences.

■ Emotional tone of the design

A consideration that guided creation of the prototypes was that the behaviors addressed in the program are normative. While older adults' use of OTC medications and alcohol can lead to serious medical complications, these practices are not aberrant in any way. Active seniors are people who, in most cases, have been drinking socially and responsibly for decades and who take aspirin and other OTC medications for headaches, colds and upset stomach as do other members of the population.

What has changed for older adults as a group is that age-related factors make some individuals less able to metabolize pharmaceuticals effectively, and their greater use of prescription drugs for managing chronic conditions makes harmful interactions more likely. The fact that the behaviors that put older adults at risk are normative suggested a straightforward approach to the content. Comments from participants supported our decision that elements of persuasion would be largely unnecessary, and perhaps off-putting, in the program.

Type size

Type size was a subject that was mentioned by nearly all participants without prompting. Individuals were very quick to say that type was too small, or that they had trouble reading it. Participants regarded most of the initial text settings presented to be too small. This is consistent with research on eyesight and aging that suggests that older adults need larger type sizes than younger readers to read text comfortably (Morrell and Echt, 1997; Vanderplas and Vanderplas, 1980). The design team was familiar with this literature, but it is significant that a bias toward use of smaller type and generous compositional "white space" prevalent in design culture and education (6) manifested itself in our initial prototypes despite this preparation. Participants in both focus groups expressed annoyance that available space was not used for making type larger.

A.3 Maybe you could enlarge that [text] slightly
A.4 large type. yeah, larger type helps
A.2 you got a lotta room there
B.2 it's hard to read
B.4 the print could be a little bit larger
B.5 there is plenty of room there

(Participants are identified in excerpts as members of either group A or B, and by the number assigned to them during transcript analysis. In the first two visual sessions, from which most of the comments reported here were drawn, only five participants were present in each group.).

Type style and character

Unlike type size, comments about type style had to be prompted. A simple explanation for this is that people who are not trained in typographic detailing do not view type variables with as much interest as communication designers. However, style is also a matter of taste, and some members may have felt uncomfortable talking about aesthetics in a group setting, especially if they felt they knew little about type or graphic style.

While comments about type characteristics were not offered spontaneously in most cases, type style did have salience for the participants. Once opinions were voiced they were strong. Participants generally lacked a vocabulary to discuss type features, but their comments are revealing.

A.1 Oh I like it. It's easy to see. I don't like the curlicue kind [serif faces] I like the, uh...[participant doesn't have a word to describe sans serif]

A.2 Block letters.

A.1 Block letters! Yes, I like that much better. It's easy to read. That's what we're accustomed to reading—we read the newspaper and you don't have too much curlicues. You have it much more block letters.

The design team's prediction that older individuals would be more comfortable with serif type faces than with sans-serif faces was not supported. Since all texts in the PEP were written to be brief and to read like display type, the participants expressed unanimous (7) preference for the use of all Stone Sans Bold type in the third prototype. This is not surprising as Stone Sans was designed, in part, for readable screen display.

The final design employed 20 pt. Stone Sans Bold for text type, and 28 pt. and 32 pt. Stone Sans Bold for headings as created for a 640 x 480 pixel screen display. Some tertiary labels, such as generic names of pharmaceuticals, were presented in 18 pt., but the preferred minimum type size for the program was 20 pts.

All type had to be set bold to be read comfortably by the participants. This eliminated weight change as a variable, so type size and position in space became the principal means for text differentiation. Body text was set flush left/ragged right, and was set in small blocks of text for rapid reading. Line lengths were typically two to four words in length. The longest block of continuous text was five lines. Texts were written for this presentation format and were tested to maximize clarity and brevity.

Participants were also sensitive to capitalization. They were disturbed by headings that were all lower case or employed only one capital letter at the beginning of a line with subsequent words being all lower case. Here, the modernist preference for a limited use of capitals (8) was in conflict with their expectation that headings should employ initial capitals throughout. Comments on capitalization were unprompted.

A.5 I think the capitals help out [initial capitals in heads], where you don't have them there [in figure #1]

B.1 and the capital A on the antihypertensives seems to make more emphasis on it. the little a...

Participants also expressed strong interest in seeing particular words in the text emphasized. However, because text was already set bold, increasing weights for emphasis was unpleasant. Participants had difficulty perceiving words set oblique, and they could not distinguish hue variations in the text well, a finding consistent with a research demonstrating loss of color perception with age (Kline and Schieber, 1985; Morris, 1994). However, participants indicated that they wanted to see keywords underlined for emphasis. This contradicts fine typographic traditions, but it reflects participants' comfort with typewriter conventions as was expressed in the comment—"We're used to seeing it [type] underlined." The decision to underline words for emphasis is partially supported by empirical research (Taub, 1984).

The issue that elicited the greatest number of spontaneous comment was contrast. All initial prototypes were found to lack sufficient contrast. This is consistent with studies suggesting that the ability to perceive light/dark and color contrasts diminishes with age (Kline and Scialfa, 1997; Charness and Bosman, 1992).

The illustration style of figure 1 caused basic contrast problems for participants. Figure 1 defines the contours of the human figure with a gradation of neutral color to imply volume. Difficulty discriminating low contrast edges of shapes is a visual deficit associated with aging (Morrell and Echt, 1997) and several participants found the smooth transitions from gray to white to be indistinct.

The needs of older viewers for strong contrasts in imagery contradict a traditional orientation in color theory education for designers toward reducing contrasts of hue to achieve harmonious color composition (9). Like the use of small type sizes, this bias toward working with hues similar in value and/or "graying back" color contrasts can amount to illegibility for older audiences.

The imagery with which we were working—an anatomical figure displaying internal organs—required some means of differentiating contiguous shapes. Contrasts of hue alone *(as presented in figure 2)* were not sufficient for a number of the participants. One of the more descriptive speeches regarding this feature indicated the seriousness of the contrast issue for older viewers.

A.1 Yes, it seems too light to me, the pill. I mean, you might think that was just a distortion on the picture, rather than—if it didn't have 'blood pressure pill' written under it, I'd think it was something else.

When a comment that an image is "too light" is expressed in a vague way it is possible to regard the matter as one of taste or degree. However, when a viewer describes an important component of an image as looking like "a distortion on the picture" it's clear that quite a bit more is at stake.

Figure 3 was regarded unanimously as the easiest figure to see, but it was also found to lack sufficient contrast. It employs a dark outline of a consistent weight around the figure and all organs. Participants regarded the outline as too thin in the first prototype, and also insufficiently dark against the colored background, but comments were consistently supportive of the illustrative approach.

A.3 I like this one the best. It's easier to see, but the size of the type... It hits you, and that's what you're interested in.
A.5 the pill stands out there
A.1 I like the looks of the graphics...

Color perception

Loss of color perception appeared to exacerbate difficulty with edge discrimination as well. Participant #5 in group B had difficulty distinguishing between hues close in value and on several occasions referred to elements, particularly colored type, as being difficult to see because "it's shaded," or "it blends."

In figure 3 text was rendered not as black, but in two hues—a dark teal, and a dark red brown. Comments from the first visual session with group B reveal that subtle color differentiations of this sort may not be perceived by older users.

B.4 well, I think the red emphasizes that it's antihypertension
B.5 I thought that was black, is that red?
B.4 no, brown red
B.3 the box is red
B.2 this is red too, the antihypertension, is red
B.5 I didn't even notice it
B.3 I do think black print would be easier to read

In subsequent prototypes the type was rendered in darker values but retained a slight differentiation in hue. Pure black type was avoided because it introduced a visual harshness to the screens, but the final color values were nearly black (10). For participants who could see color distinctions in the type this differentiation provided an additional level of hierarchy. For those with less ability to distinguish hues, all type appeared black.

Glare

Despite participant's expressed need for sufficient contrast on the screen, particularly for texts, we found that achieving good contrast is not as simple as using black type on white ground. As soon as participants in both groups saw figure 3 presented on a warm blue background they expressed a preference for the colored background because it reduced glare on the screen.

A.1 and you know that if you're going to be in facilities with lights like these, fluorescents, it [this screen design] doesn't show as much glare as either of the others. It tends to be much better...it seems to kinda settle things down as far as the light reflections

This finding is consistent with literature on older adult's higher sensitivity to glare (Kline and Scialfa, 1997; Kline and Schieber, 1985). Because the iris and pupil undergo change with age, older adults experience reduced ability to adjust to intense light sources.

The issue of glare did not come up during discussions of the first figures. However, once the blue field was introduced, it was unanimously preferred over the white backgrounds in unprompted comments. This suggests that designing effective screen images for older viewers may involve finding a balance between the need for strong contrasts in the imagery and reducing glare on the screen overall.

A light warm blue was selected for the final background color for several reasons. Older adults have the greatest difficulty distinguishing hues of similar value in the shorter (blue and green) wavelengths (Kline and Scialfa, 1997; Morris, 1994). By using blue as the background hue, other visual elements such as flesh, organs and cues could be differentiated in the red, pink, orange and brown range. The blue background also made the flesh colors of the anatomical figure appear warmer and healthier. Some research has also suggested that blue is the color most often identified by older adults as their "favorite color" (Silver and Ferrante, 1995). It's use as the dominant hue on the screen may, therefore, enhance the appeal of the program for some viewers.

■ Background

Participants preferred a plain background of a single hue and light in value over more graphically complex approaches. They regarded all shaded bars, layers or other devices that divided areas of the screen, called out heads, or separated text from image to be distracting, and as interfering with comprehension of the information.

■ Illustration style of anatomical figures

Figure 1

As discussed in the section on contrast, figure 1 employed a technique for defining the contours of the figure and organs with a smooth gradation. This was intended to give the figure volume, and presumably, a more natural appearance. In this respect it could also be said to be the most visually sophisticated rendering style presented. Figure 1 also used a more traditional medical illustration style. The pose was taken from an anatomy text book with a frontal body and head in profile. In order to avoid racial implications, the figure was not given a skin color. Rather, the edge gradation was a warm gray and emphasis was on the interior of the body, instead of on surface flesh.

Figure 1 was also designed to represent an older person. It had a larger, mature nose, and the body shape was of an older, formerly fit man with some muscle loss. The figure had no hair.

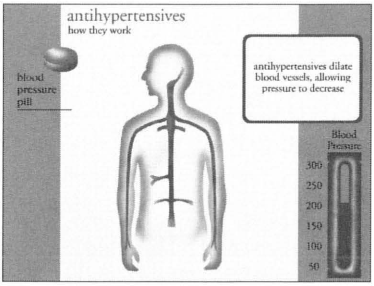

Figure 1: Prototype 1

Participants did not like this figure. As mentioned above, the gradation was hard for some in the group to see. Participants expressed that the figure looked "old" and they did not find this appealing. They also expressed discomfort with the partial profile stance, a position that seemed unnatural to them. The absence of facial features was also perceived to be impersonal. Participants only mentioned the unnaturalness of the position, the lack of facial features, the oldness, maleness and baldness, of the figure when prompted, but it is also possible that rather than looking lifelike or sophisticated in its rendering, the gradation and neutral colors caused participants to perceive the figure as machine-like, or worse, cadaver-like. Dislike of this figure was unanimous.

■ Figure 2

Figure 2 was rendered in a more diagrammatic style. The objective for figure 2 was to present the figure with simplified and more geometric shapes at the expense of naturalness. The figure and organs were presented as flat planes of color against a white ground. Of the three figures, figure 2 had the least contrast.

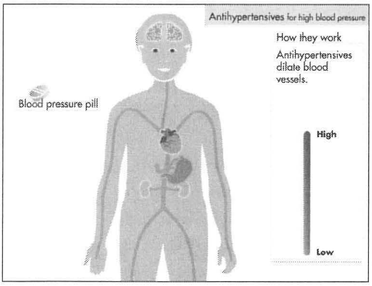

Figure 2: Prototype 2

In spite of the overall lightness and low contrast of the image, (points which were raised repeatedly in unprompted comments), the style of figure 2 was much preferred by participants over figure 1. Figure 2 was unanimously perceived to be female, and the presence of facial features and hair were mentioned as principal reasons for its greater appeal. The figure was entirely frontal, which was preferred to the partial profile of the first image. The body shape was also rounder, implying the presence of some body fat, and its simplified facial features had a youthful appearance, although the presumed age of the figure was not mentioned. The image was colorful (mainly pinks, oranges and light blues). In order to distinguish the organs from one another, some were assigned unnatural hues; for instance, the stomach was rendered as a sky blue. Participants did not express discomfort with abstraction in the color scheme. They appeared to accept it as symbolic.

A.5 it's showing the heart, which I think is important
A.1 and the kidneys, and the pancreas, and whatever that is—
the stomach or the pancreas—stomach is blue

■ Figure 3

While figure 2 was generally preferred over figure 1, both groups expressed a unanimous preference for the graphic style of figure 3. Like figure 2, it was colorful and flat, with principal differences being its colored background (light, warm blue/gray) and dark outlines around the body contour and organs. Although diagrammatic, figure 3, was also rendered more descriptively than figure 2 in terms of definition of facial features and organs.

A.1 but this is a nice figure. it looks more like a human,
too, you know.

Figure 3 was criticized for being too light in value, and for lacking contrasts. However, once the contours were thickened and darkened (*figure 4*), participants in both groups expressed satisfaction with the style solution and did not want to see the other figures again, even with new variations.

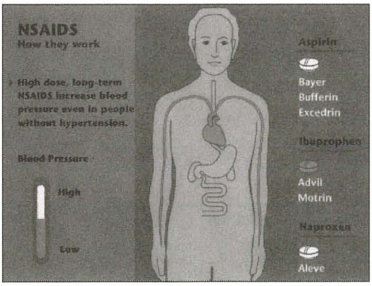

Figure 3: Prototype 3

■ Representation of the figure

One of the goals for design was to create an anatomical figure that was gender and race neutral. We were only partly successful in achieving this end as will be discussed below.

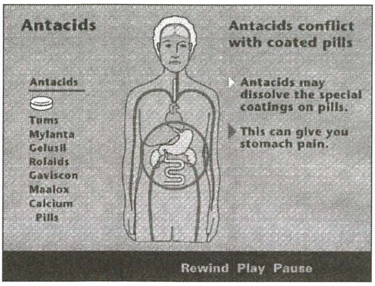

Figure 4: Prototype 4

Comments about racial and gender characteristics of the figures had to be prompted by the moderator in all cases. Several explanations for this are possible. First, participants may not have thought about representation until they were asked to comment on it, or identity matters may not have seemed important to them given the informational purpose of the program. However, race and gender are relatively sensitive issues in American culture, and participants may also have been reluctant to discuss their perceptions in a group setting. Most of the joking in the sessions occurred during these conversations. Prompted discussions of identity tended to be cut off rather quickly by someone raising another, usually more technical, issue.

Agreement was unanimous in both groups that figure 1 appeared to be male in its body shape and features. Figure 2 was perceived unanimously to be female in its body shape and features by both groups. Figure 3 was discussed in group A as appearing somewhat gender neutral.

A.1 it looks like a person. it's a human body. an 'it'.
A.5 essentially, a generic person

Group B, a group of all women, expressed concern that figure 3 appeared to be a white male, although it did have some features they regarded as ambiguous.

B.1 it looks like a male to me
B.2 it looks like a male
B.1 but if the hair was removed it would look sort of non-gender
B.2 um-hmm
B.5 you want it without hair?
B.1 but you know, people get all bent out of shape if they identify a male, instead of a female—the shape of the head [on this one] they wouldn't know which it was

Both groups also made comments that were dismissive of the significance of gender and identity features altogether.

A.2 it doesn't matter what it looks like
B.3 what are we supposed to be looking for?
B.2 that's what I'm saying, what is there in the figure there?
B.1 I don't think it would make any difference would it, male or female?
B.5 I can't tell a male from a female any more anyway

It is impossible to know for certain whether these comments reflect genuine beliefs (that the features of a figure do not influence a viewer's perception) or whether the comments imply unease with the questions. What can be determined from the transcripts is that despite these comments, some diversity consciousness was present in the participants, and, at least publicly, this group of older, white adults wanted the program to express some values of inclusiveness.

For subsequent sessions, figure 3 was reworked to blend male and female features to a greater extent (*figure 4*). Race proved to be a more difficult area for achieving perceptions of ambiguity. We found that very slight differences in line direction, length and shape produce racial associations in even simplified images. After the focus group sessions were concluded and final production was begun, we made the decision to create a series of six figures that reflected different racial characteristics. Some of the figures appeared to be more male, others more female. In the context of the completed program, mixing up the appearance of the figures helped to break the monotony of the similarly formatted frames. Thus, for each of the four health categories, (high blood pressure, blood thinners, upset stomach and pain relief) five to eight different animations were presented with different racial features dispersed among the figures. This reinforced the message that all groups suffer from common drug interactions.

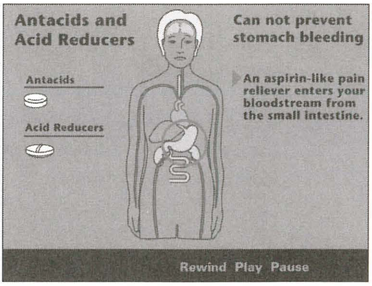

Figure 5: Screen sample from the final interface design showing one of six ethnic figures.

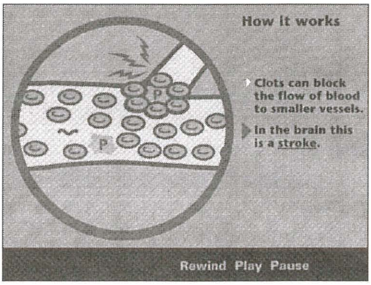

Figure 7: Screen sample from final inteface showing zoomed anatomical detail.

■ Completeness of organs in the anatomical figure

Another matter tested was the anatomical completeness of the human figure—specifically whether participants preferred seeing only the system under discussion in a particular animation, or whether they wanted to see a more complete set of organs at all times. We expected participants to prefer a simplified presentation, but we found just the opposite.

The first topic discussed was blood pressure, so we presented figure 1 showing only the circulatory system. Figure 2 displayed some additional organs, including the brain, stomach and kidneys. Figure 3 showed kidneys, stomach and a simplified digestive tract. The matter did not have to be prompted. Soon after figure 2 was displayed, both groups mentioned that they preferred seeing the more complete organ set. Their desire to understand drug side effects was fairly keen and they wanted to be able to "see" in the animation if a drug affected any vital organs, particularly the brain. Comments about the brain arose spontaneously throughout the discussions.

A.1 and, I like the one [#2] that shows it goes up to the head—I like that part, because it does go up to the head—to show that it does go all to the whole body
A.2 ...this one—you can see more veins in his head
A.4 ...I like to have more
A.2 you want to have guts in there?
A.4 yes
A.1 yeah, I want guts too, guts and veins, and goin' up into the head, and the works!

B.2 but it does show where most of the organs are located
B.1 now will any of the things [pharmaceuticals] identify the brain itself, any effect on the brain?
m some of the animations will. what do you think about seeing the brain?
B.1 well, I'd like to see it there, if some of the things are going to affect it. The other one didn't really have any [figure #1 did not have a brain]

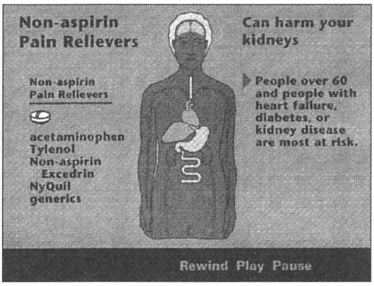

Figure 6: Screen sample from final inteface design showing another ethnic figure.

Although the participants did not mention reasons for wanting to see the brain, their concerns are easy to understand. Many medications can cause temporary mental dulling, drowsiness or disorientation. Active older adults particularly fear these conditions as they can lead to incidents that result in loss of independence. Stroke is also a primary health concern of older adults as one stroke can quickly lead to permanent losses of mental functioning and independence.

Information hierarchy

Standard conventions for information hierarchy and placement of elements on the page were preferred over the non-standard variations tested. Participants wanted to begin reading from left to right, and once they were at the right they wanted to be able to stay there.

A.5 where they have it [body text on right] here now. you can just drop down and read it

Participants did not want to have to scan the field for new information and did not like to see typographic elements too dispersed on the page.

B.5 the type is...
B.4 it's like you've got it all over

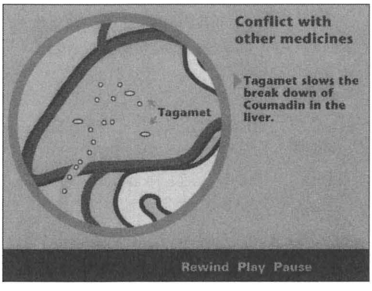

Figure 8: Screen sample from final inteface showing zoomed anatomical detail.

■ Interaction design

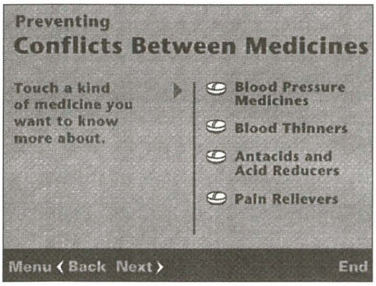

Figure 9: Screen sample from final inteface showing a sample menu page.

Standard conventions for interaction design were also preferred. Some basic functions were tested by intentionally using non-standard relationships (e.g., on some prototypes forward and back positions were reversed in the menu bar from their relationships on standard electronic equipment). It was clear that the older adults in the groups were familiar with the operation of home VCR equipment; they noticed discrepancies and they expected the interactive program to follow VCR conventions.

Several of the participants had home computers and a few used the Internet regularly. Those with Internet experience expected the program to work like the Internet. Others had little experience with computers and/or interactive environments, but VCR controls were assumed by the participants to be natural standards upon which the interface should be based.

Participants strongly preferred prototypes that contained graphical cues over those that did not. They wanted to see a bright red arrow appear on the screen to attract their attention every time a new text block appeared. They tended not to notice that text content had changed if they were not cued. Parts of the body that were under discussion in the text were circled dynamically in bright red. Some of these circles then zoomed out to fill the screen so that a “microscopic” pharmacological interaction could be animated.

Interactive functions were kept to a minimum to reduce navigation confusion. During the pilot test it became clear that some users with less mental and perceptual functioning needed to be able to proceed through the program in a strictly linear way. For these users the interactive script was written so that they could advance through the entire program by simply touching the “Next” button at the bottom of the screen after each segment ended. Other users with higher levels of functioning and more experience with computers wanted a second level of interactivity so that they could make selections by touching active areas of the screen, just as they might use the Internet. The final program design being used in the clinical trial employs both levels of interactivity.

■ Bifocal corrective lenses

Early in the sessions it became clear that the use of bifocal eyeglasses created problems for some users, and that use of bifocals by users would have to be assumed to be a condition for use. In the focus group environment the display field was a 17-inch, vertical computer monitor. Participants wearing bifocals had to adjust their head positions frequently and uncomfortably in order to read the screen through the

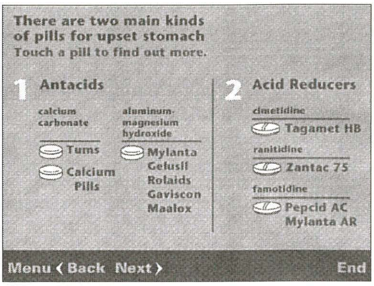

Figure 10: Screen sample from final interface showing a sample menu page.

magnifying lens in the lower half of their glasses. In the pilot test the program was used on laptop computers equipped with touch screens. Here the problem was found to have been largely eliminated because of the more natural reading position of the laptop configuration.

Standard interaction design protocol tends to recommend positioning menus at the top of a screen. In our laptop touch-screen environment we placed the menu at the bottom of the screen so that users wearing bifocals would be able to focus on these selections more easily and with less head adjustment. This location is also consistent with conventions that position "next" or "for more information" buttons at the bottom center or bottom right corners of a screen (Kristof and Satran, 1995). For some users the "next" button was essentially the only interactive function used.

■ Sound

A decision was made early on not to use sound in the program. Nielsen and Shaefer (1993) have reported that older users, unlike younger users, find computer programs more difficult to use and follow when they incorporate sounds.

■ Motion

Design of motion for older adults must be slower and more consecutive than moving graphics for younger audiences. Whereas younger people may enjoy the aesthetic experience of seeing multiple events occur simultaneously on a screen, our participants found simultaneous events frustrating. This is fully consistent with studies of older adults and motion phenomena. Perception research demonstrates that visual tracking skills generally diminish with age (Kline and Scialfa, 1997; Morris, 1994).

From our sessions we determined that only one important event involving motion could happen at a time. A detail area could zoom large while other elements faded (and this particular example of simultaneity was preferred over two-step zooms), but events involving program content needed to be sequential. The base transition time for events was at least three seconds in duration for the viewer, with five seconds being standard. Two to three lines of text (six to eight words) required a minimum of five seconds of display for comprehension, and texts of up to six lines required ten. Important texts were generally displayed for at least ten seconds.

The actual playing time of a computer animation will vary depending on the speed of the computer on which it is played and other factors such as available memory. Given this changeable environment we tested the animations with focus group participants by looking for a base number of seconds to be allowed for different kinds of transitions. Animations produced on different machines could then be slowed down or speeded up within the Macromedia AuthorWare program to play at appropriate speeds on the laptop computers.

Not surprisingly, younger individuals have tended to perceive that the animations move too slowly. Nursing students being trained to deliver the program to older adults in the home trial were frustrated by the pace and often suggested that, "A could happen while B is transitioning...," or the like. However, older learners clearly need a greatly reduced motion environment for comprehension.

Generalizability

The findings reported above are specific to the program developed for this project. However, one of the striking things about the project was that nearly all of the relevant resources we found noted the small amount of empirical research available in the area of older adult's preferences and requirements for computer interface design. Because focus group studies are not generalizable to a larger public (due to their small sample sizes), the findings reported here can only be assumed to represent the contributions of twelve individuals. Nevertheless, we hope that this report may provide a needed starting point for others intending to design interactive materials for older adults in the near future. Further, we hope that this report may stimulate further refinement of methods for studying the design implications of aesthetic preferences and practical thresholds required by older adults and other user-groups for visual, on-line learning materials.

Conclusion

People over age 60 are particularly vulnerable to injury from interactions among prescription and over-the-counter medications and alcohol. The study Preventing Drug Interactions in Older Adults is an effort to create an effective interactive software intervention to reduce the risk of certain harmful interactions in a representative population of independently living seniors.

Findings drawn from the qualitative pre-study, conducted to guide design of the software prototype, suggest that particular visual features of interface design may enhance comprehension, appeal and ease of use in such a program for older adults. Specifically, interrelated visual factors such as use of bold, sans serif type in sizes of 18 points or larger, strong contrasts for text and images, use of bold, descriptive outlines in illustrations, and a simplified and glare-reducing background, may enhance the appeal of the program for older users. These factors may mean the difference between legibility and illegibility for some. Animated components of such a program need to play at slower speeds than might be preferred by younger people. Strong visual cueing and clear, simple navigation functions are especially important for this population. In addition, we learned that older adults were able to express clear preferences for particular approaches to illustration style, typography and representation of the human figure when presented with alternative prototypes. Some of the preferences expressed by participants in this study contradict standards of aesthetics and stylistic orientations commonly taught in design education programs in the US.

■ End Notes

1 During the pilot test, nursing students observed thirty subjects in a one-on-one context as they used completed, interactive segments of the program. The students noted any difficulties encountered by the participants during this usage. Alterations were made to the program based on this observation period prior to its use in the clinical trial.

2 The objective of the clinical trial is to measure knowledge, self-efficacy,** and self-reported self-medication behaviors in an experimental group of older adults after they use the software program as compared against a group that does not use the program, but receives only a conventional printed text containing the same information. (The conventional document is a word-processed, text-only fact booklet, containing the same text as the program. It is similar in form to "best-practice" printouts provided by some pharmacists. The text is set in 14 point Arial typeface [IBM Helvetica] and is written at a 6th grade reading level.) Results from a control group that receives no intervention at all, but that completes the same battery of questionnaires at identical time intervals, will be compared against those of the experimental and conventional intervention groups.

****** Self-efficacy, or a person's level of confidence that he or she can successfully complete a task or achieve a goal, is theorized to influence user outcomes in this study. Self-efficacy is a construct central to Albert Bandura's Social Cognitive Theory (Bandura, 1977, 1986, 1997) that considers the influence of self-reflective processes on behaviors. Self-efficacy is not a fixed personality trait like self-esteem, but is related to whether an individual attempts, persists and achieves successful completion of a particular task. Self-efficacy has been shown to offer explanation of performance of behaviors beyond knowledge alone (Strecher, DeVellis, Becker and Rosenstock, 1986). Investigators have found small to modest correlations between self-efficacy and actual measures of knowledge for health related tasks, suggesting that each cognitive construct measures a separate component (Murdock and Neafsey, 1995). Such findings and others have been interpreted repeatedly to mean that both knowledge and self-efficacy are important and different cognitive precursors of behavior (Bandura, 1977, 1986, 1997; Froman, 1996; and Strecher, et al., 1986). According to self-efficacy theory, subjects who believe that they will be able to comprehend, and act on, information will be more likely to do so effectively than individuals who lack such confidence. In this context, a principal objective for design of this program was to make the learning task pleasant and manageable for older adults, thereby reducing user's self-doubts about their ability to learn and apply the concepts.

3 In *Dynamics in Document Design*, (1997) Karen A. Schriver noted that "little work has assessed the design of hardcopy or online information for this population [older adults]," and "...surprisingly, there are almost no studies of elderly readers in the document design literature (507)."

In *User interface design for older adults* J. M. Morris wrote "The lack of knowledge of older adults can produce false intuitions for even the most expert designers...the state of designer awareness implies that there is a need to collect and organize characteristics and recommendations from existing sources, and present them in a form understandable to anyone who is interested in designing for a population that includes older adults (375)."

4 For a discussion of sources of bias in design education, see Dietmar Winkler's discussion in *User-centered graphic design* (1997).

5 David Sless discusses the difficulty that people often have articulating their impressions of the visual features of products (Sless, 1996). He writes, "they make comments about the improved versions, such as 'it looks professional,' 'it's easy to read,' or 'it's nice to look at' which gives a sense of something underlying what is articulated (259)." We hoped to generate a more explicit and actionable dialogue in our sessions through use of the compare-and-contrast discussion approach.

6 The imperative of dynamic "white space" in composition as taught at the Bauhaus and as discussed by Jan Tschichold in *Die neue Typographie*, 1928, (published in English in 1995 as *The New Typography* with translation by Ruari McLean) has had tremendous influence during the twentieth century on the assumptions designers have brought to tasks involving typography. The high value placed on dynamic page composition in graphic design education and practice has biased designers toward use of smaller type faces as a means of preserving white space and creating finer textures in settings of text. This orientation is at odds with older adult's requirements for information retrieval generally, but it is especially problematic in computer environments where screen space is limited.

7 The word unanimous is used in this paper when a majority of the participants in both groups expressed verbal agreement with an idea and no opposition was voiced. However, because of the social aspects of the group environment, it has to be assumed some opposing views may have gone unvoiced.

8 Tschichold's discussion of capitalization in *The New Typography*, (1995, 78) is characteristic of the modernist preference for lower case headings.

9 In *A Primer of Visual Literacy* (1986), Donis A. Dondis uses rhetoric inherited from Bauhaus masters Josef Albers and Johannes Itten to discuss color contrasts. "Saturated color is simple, almost primitive, and always given preference by folk artists and children...the less saturated colors reach toward neutrality of color, even non-color, and are subtle and restful (51)." The effect of this pedagogy, although useful for describing color harmonies, has produced an orientation among designers to use subtle color contrasts that may be difficult for older adults to discriminate.

10 The hues used for text and heads in the final program as created in the Adobe Illustrator 7.0 program were: dark red brown: C46, M65, Y70, K75 and dark teal: C100, M65, Y65, K60. The warm blue background was C48, M28, Y20, K0.

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Zoe Strickler holds a B.F.A. from the Minneapolis College of Art and Design and an M.Des. in visual communication design from the University of Alberta, Edmonton, Canada. During the 1980s she worked as a graphic designer. Following this she held academic appointments to teach design. Her research interests link theories of behavioral change to health and safety communication applications for specific audiences. She is currently a design researcher in the School of Nursing at the University of Connecticut.

Patricia Neafsey holds an M.S. in nutritional biochemistry from Cornell University, a Ph.D in Pharmaceutical Science from the University of Connecticut, and completed post-doctoral work at Tufts University. She has authored numerous papers on nutrition, pharmacology and the use of interactive computer technology in nursing education and patient dose risk reduction. Recent work involves research collaboration to measure the effectiveness of an interactive, animated educational software program for reducing high-risk self-medication behaviors in older adults.

■ The research team

The research team reflects the interdisciplinary nature of the problem. Patricia Neafsey, Ph.D. (pharmacology), heads the project as principal investigator. Design collaborator, Zoe Strickler, M.Des. (visual communication design), directed the visual communication research and design and production of the animations. Collaborators Robin H. Froman, Ph.D. (educational psychology), and Steven V. Owen , Ph.D. (educational psychology), provided guidance for development of the measurement instruments and will contribute statistical analysis for the clinical trial. Doctoral nursing student Juliette Shelman, assisted by honors nursing student Antoinette Padula, lead the qualitative language prestudy for design of measurement instruments and the program. She is also directing the field nurses who are implementing the clinical trial. Design students Michael Skiles and Mai Phung contributed design of prototypes for the formative research phase. Design students Amy Ellingham, Sam Kim, and Meena Stout provided production assistance for segments of the PEP.

The Mirage Project:
An Experimental Qualitative Reception Study

Bruno Ingemann

Abstract

The Mirage Project focuses on how readers ascribe meaning to the pictures in the newspaper. The conventions of the newspaper as regards truthfulness, reliability and authenticity see the photograph as data, as information. But the photograph is more than that. Through the project sixteen informants' reception of four different pictures are analyzed in relation to the news articles to which they belong. Through the use of different visual variants for the same article the reader gets the possibility to be critical and to choose between different pictures.

The Mirage Project gathers this chaos of the readers' choices and arguments for their choices through a series of analyses. In the light of the new digital culture the reader makes a different frame of understanding than newspaper conventions normally offer. The readers are disobedient. They have other values and other demands on quality than expected.

This article is a presentation of a reception project where the experimental method is developed to extend the semiotic meaning potential and partly defines the readers' values and preferences.

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Visible Language 36.1
Ingemann, 30–47

Article

The Mirage Project focuses on how readers ascribe meaning to the pictures in the newspaper. The conventions of the newspaper, as regards truthfulness, reliability and authenticity, see the photograph as data, as information. But the photograph is more than that. Through the project sixteen informants' reception of four different pictures are analyzed in relation to the news articles to which they belong. Through the use of different visual variants for the same article, the reader gets the possibility to be critical and to choose between different pictures. The Mirage Project gathers this chaos of the readers' choices and arguments for their choices through a series of analyses. In light of the new digital culture, the reader makes a different frame of understanding than newspaper conventions normally offer. The readers are disobedient. They have other values and other demands on quality than expected. This article is a presentation of a reception project where the experimental method is developed—which partly extends the semiotic meaning potential—partly defines the readers' values and preferences.

The Mirage Project is an experimental qualitative reception study with the focus on complexity and experience. It is experimental in the sense that the material used is constructed in four different versions concerning the pictures and the captions—there are a total of four different topics and articles. It is experimental in the sense that the informants are put into a position where they have to sort and rank the different versions of the selected article. It is a qualitative reception study where the bodily embedded selection process is extended by very open personal interviews concerning their likes and dislikes.

The right picture of unemployment

We can take a look at an example from the project. The content of the article is about unemployment. The informants were presented different versions of the article and I asked them to rank the four different versions. The question I posed to each one was: "Which one do you like best?" Very quickly the informants ranked the different versions—and then we started talking about what they saw in their pictures, what they were thinking about them and how they related personal experiences to the picture in its context.

NEWSPAPER Tuesday, 17 november 1992 • NEWSPAPER • 1. section 5

A real loser. Photo: Tine Harden.

ONE IN FIVE IS A LOSER

The long-term unemployed: Almost 100.000 Danes have been unemployed so long that they will never get a job. That is on average one in five of all adults between 18 and 60. The Social Commission calls them losers. They are lost to the labour market. But do they consider themselves “losers”?

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Polarised Society

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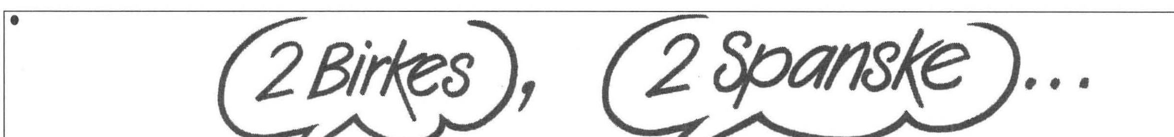

Beer-belly

ONE IN FIVE IS A LOSER

Long-term unemployment is bad economy. But it is also freedom to expand and engage. Photo: Tine Enghoff.

The long-term unemployed: Almost 100.000 Danes have been unemployed so long that they will never get a job. That is on average one in five of all adults between 18 and 60. The Social Commission calls them losers. They are lost to the labour market. But do they consider themselves "losers"?

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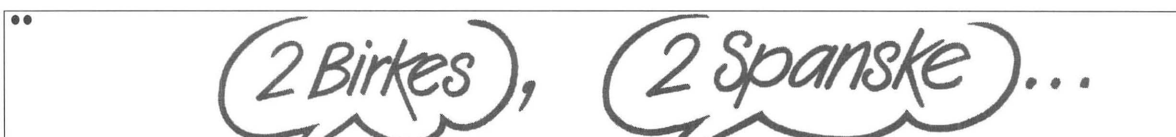
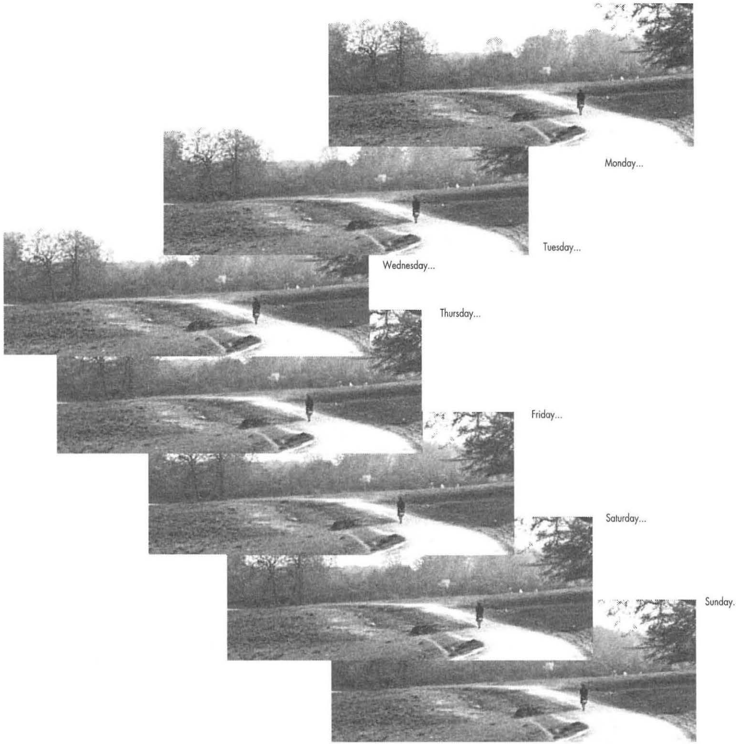


The Accordion

NEWSPAPER Tuesday, 17 november 1992 • NEWSPAPER • 1. section 5



ONE IN FIVE IS A LOSER

The long-term unemployed: Almost 100.000 Danes have been unemployed so long that they will never get a job. That is on average one in five of all adults between 18 and 60. The Social Commission calls them losers. They are lost to the labour market. But do they consider themselves "losers"?

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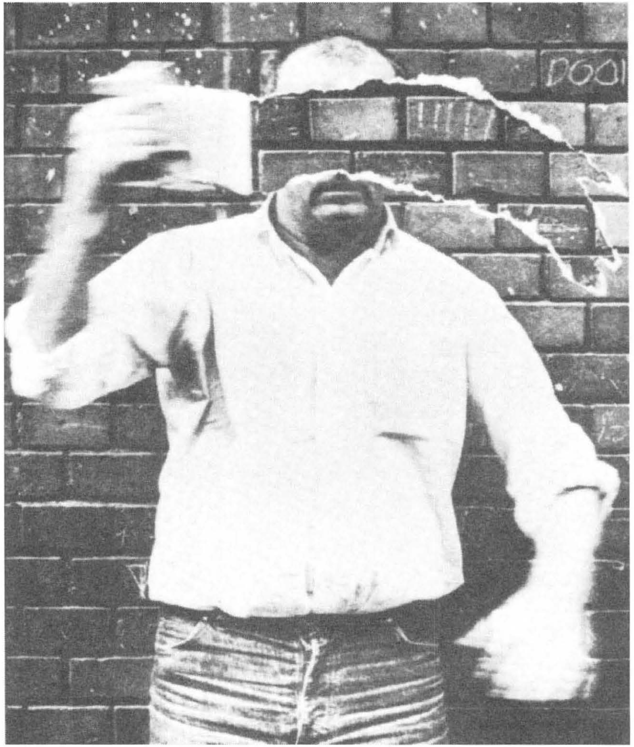
The Seven Days



"To lose one's job is also to lose one's identity. I am no longer a person but an anonymous 'loser'. Montage: Michael Sand.

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The Torn-Away Face

The lead to the article with the headline "One in five is a loser"—goes like this: "Long-term unemployment: Almost 100.000 Danes have been unemployed so long that they will never get a job. That is on average one in five of all adults between 18 and 60. The Social Commission calls them losers. They are lost to the labour market. But do they consider themselves 'losers'?"

I will briefly describe the four pictures. In the first picture the man with the beer-belly is holding a beer in one hand and a cigarette in the other. He is fat and seen from the side so his belly is most visible. You can't identify him because the picture is cropped to eliminate his face. In the second picture the couple with the accordion are sitting in their allotment garden in front of their house. They are lightly dressed and the woman sits at her sewing machine. She is lovingly holding her hand on the man's head.

In the third picture we see one picture repeated. The picture shows a lonely person walking in a deserted landscape on a path. The picture is repeated seven times and the caption goes "Monday, Tuesday, Wednesday," etc. In the fourth picture we can see a man against a wall his face torn/away—in a way he is destroying himself.

■ Inge—The Beer-belly and The Accordion

I will focus on one of the informants. Inge is thirty-nine years old and divorced, living with two boys. She is a municipal employee and works with institutions for the mentally handicapped. In her daily life she is confronted with many depressing and tiresome problems so she attaches importance to the positive aspects in life.

She chooses the picture with the happy couple and the accordion, because she finds that she gets in a good mood by looking at them. They have a common feeling and it seems like they are a good team. But in her negotiation with herself she quickly comes to a dilemma. In the context of the article she thinks that the picture is too positive. She starts creating a conflict between "myself" and the "other."

She says that when the "other" writes about unemployment, quite different pictures are used. The picture the other uses is more like the man with the Beer-belly. Inge says that this picture is really a typical picture and then she starts talking about the men she sees drinking every day at the supermarket. She is aware that in her thinking she is creating a narrow understanding of the unemployed. She thinks that one normally is more negative to people that are unemployed. But then she changes her attitude. In her own life she knows people that are unemployed but have a lot of energy; they are positive and some have succeeded in getting a job. She is fighting against the mediated image of the unemployed. She is close to accepting the picture of the man with the beer-belly—because it is in this way she normally finds the unemployed portrayed. But she ends up with the happy couple with the accordion, because it reflects people she knows. She understands her personal situation reflected in the good close teamwork she finds in the picture.

If you think that the mediated and repeated picture of the unemployed is the right picture—and that a person like Inge is rather strange—there would be no problem. But it is more problematic. Ole is forty-one years old. He is well educated and knows a lot about unemployment. His choice is the manipulated photo of the man with the torn-away face. At first the picture itself fascinates him. He says that it is a good picture because it catches his eye and he sees the head of the man that is not there, but is transformed into a poster that is torn-away. He finds that the picture has some depth—while it does not clearly tell the story that if you are unemployed you have no identity—it makes him think.

He talks about the fact that when people meet we ask them what they do for a job, because in this culture the importance of work is greater than making money. It is more about having identity through a job, or loosing identity, if one does not have work. He thinks the picture opens up this cultural norm for us to consider. Back to the problematic attitude of Ole. He is tired of hearing about the misery of being unemployed because he has heard that hundreds of times before. Now comes the problem: if the standard picture of the man with the Beer-belly were accompanying the article—he would not read it! The repetition and addition of mediated photos has worked so well that Ole would reject the article because of the picture. The picture would be invisible to Ole—and so would the article.

■ The mediated image—and "reality"

The informants act more on the mediated image—than on reality. Whether a picture covers the content of the article or the theme—is not a question of realism or the picture being authentic. Some informants have the feeling that they have to accept the mediated image—and moreover that their own experience makes the foundation for their choice. Reality is not only a depiction of the external world—but a construction in the head of the readers. The contexts the readers have consist of their experiences, a knowledge of media and a concrete knowledge about the topic. The readers' context influences the reading strategies and values that the readers allocate to the picture in the context of the article. The reader invents and constructs different reading strategies. In the following, I will reveal how the interviews with the informants can be seen from the theoretical perspective of the reading process.

Developing a picture theory in relation to the readers from an ordinary semiotic point of view, the pictures in a newspaper are seen as signs and the whole idea of analyzing the pictures is to reveal the meaning potential of the picture. One can be more rude and say that the analysis is used to reveal the structure of signs. The semiotic analysis rules out the reader.

> When a reader passes her eyes over an article and a photo in a newspaper, she first looks at the people, their eyes and their relationship to each other as expressed in their body language—from this she makes references to reality. I call this process "seeing-as." Secondly she looks at the photograph as a photograph. This process I call "seeing-in." She is maybe not aware of it, but she will compare this specific photo with other pictures she has seen in newspapers, magazines, photo albums and television. And she can see the color, texture, lines, tones and composition as the color, texture, lines, tones, composition. Thirdly the reader looks at the photograph and is fascinated by the way the photo looks back at her. The photo reveals emotions and feelings from her own life. This process I call "seeing-on." This is what fascinates her and makes her interested in the picture and maybe motivates her to read the article accompanying the picture. The reader looks at the picture—and the picture looks back at the reader. It is in this double movement that the picture is ascribed quality. The quality of the picture relies not only on the aesthetic expression and composition. The quality of the picture is not only whether it covers the content of the article well. The quality of the picture arises when the reader can transfer knowledge, experience and memories to the picture.

The reader comes to the newspaper in order to get some information about the state of the world. One can say that the reader has different goals she wants to achieve. In short it can be seen as a transaction between:

1 aesthetic quality

2 attention

3 evaluation

> The first relation between reader and object is the aesthetic quality. John Dewey describes the difference between perception and recognition as fundamental. Recognition can be seen as a relapse to previous schemes of interpretation or stereotypes when confronted with an object. Perception involves an active reception of the object so that its qualities can modify previously created habits or schemes. "Perception, on the other hand, occurs when we experience a thing and realize its own inherent character. The point is that the object imposes certain qualities on the viewer that creates new insights, which is what makes any experience aesthetic in Dewey's perspective."(Csikszentmihalyi and Rochberg-Halton, 1981:44). Perception is essential in aesthetic experience and leads to psychological growth and learning. In the following I will call that the extension experience.

Dewey means that recognition is stopped perception—before it has had the opportunity to develop freely. (1934/1958:52–54). One can see that Inge, in the first example, used recognition in her negotiation with the picture of the Beer-belly Man and she recognizes the picture at a stereotypical level as the normal way to portray the unemployed. When she looked at the picture with the happy couple with the accordion, she was open to adjust and change her scheme; the picture involved an active extension.

Attention is the second transaction between reader and object and focuses on how psychological energy is channelled. (Csikszentmihalyi and Rochberg-Halton,1981:184). In this project the informants rank the four versions in relation to each other and this process can be seen as an expression of how attention and psychological energy is channelled into the picture. At one point the picture can be seen as so boring and well known that it is rejected. Or it can be seen as so threatening that the reader can't stand looking at the picture. It is in between the extremes that the psychological energy can be constructed as a flow of integrated attention in order to guide the reader to realize her goals.

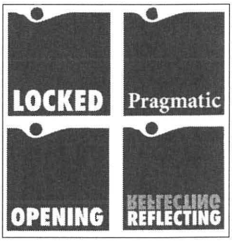
Evaluation is the third transaction between reader and object—this can be seen as the goal for the reader. Reading a photo or a newspaper article can be a goal in itself, because it serves as entertainment and pastime. Secondly, the goal of the transaction can be to reflect one's self and relate to a vision of the good life. Thirdly, the goal can be to feel enlightened as an ordinary citizen about personal and social problems.

The three dimensions in the experience of the reader are not precise enough to catch the complexity of the response from the informants. Through a grounded theory approach, the project has developed the theory of The Four Gazes. A theory of reading strategies and the values associated with them are important to the reader. This theory needs to include the aesthetic and referential in relation to topic, expression and content. It needs to include personally relevant and previous knowledge; it needs to capture the fact that the concrete readers' values are not constant but are fluctuating all the time and through the reading act there is a shift between different reading strategies. The theoretical frame gathers the aesthetic, the referential, knowledge and emotional elements in four gazes. The first is The Locked Gaze; the second is The Opening Gaze; the third is The Pragmatic Gaze; and the fourth is The Reflecting Gaze.

The Locked Gaze focuses on the photograph as a categorical picture that is a stereotype and primarily confirms the schemes the reader already has. It is through recognition that we confirm what we already know. Like Inge, when she looks at the picture with the Beer-belly man and finds that is how unemployment normally is portrayed.

The Opening Gaze focuses on the photograph itself with its inherent qualities that can function as an extension of the readers' own experiences. This is an aesthetic gaze that focuses on extension, surprise and new meanings. The aesthetic and emotional qualities mean something in themselves. When Ole chooses the picture of the Torn-Away Face, he is aware of the picture in itself as surprising and aesthetically new to him.

The Pragmatic Gaze focuses on what the reader can learn from the newspaper and how the information can be used in his or her personal life. The picture and the topic need to touch the reader's daily life. Like when Inge is discussing the represented picture in relation to her own personal knowledge of her friend's unemployment.



The four gazes

The Reflecting Gaze uses the picture as a mirror—not of reality—but of itself. It is through this reflection of other people's happiness and misery that the readers can get a clear understanding of their own identity and values. When Inge talks about the picture of the happy couple with the Accordion, she also focuses on their personal relations expressed in the situation, but mostly on the loving hand on the man's head. They are a good team.

The four gazes are used in a dialogical process. In the process, Inge fluctuates between "herself" and the "other". Between recognition and extension. Between the positive and the negative. But she maintains the picture of the happy couple and the accordion as her first priority. Inge changes her reading strategy in this negotiation. She uses The Opening Gaze where the content and aesthetic quality of the picture creates an experience of something very positive. She shifts to The Reflecting Gaze where she reflects on her wish for fellowship, happiness and teamwork. She shifts to The Pragmatic Gaze and finds her own relations to people she knows that are unemployed and have zest for life and are positive. But it is also here she finds the social goal to be informed about daily problems. This leads her to The Locked Gaze where she confronts the "others" picture of how the unemployed are normally presented and she must reject the picture of the happy couple and the accordion. She turns to the man with the Beer-belly. This is the typical picture.

It is an important point that it is not the concrete photograph that can be said to contain certain reading strategies. It is the individual reader who can use different reading strategies on the concrete picture. Even the most conventional picture can contain elements that for one reader invite the use of many different reading strategies. Even the most conventional picture can for some readers be seen with The Opening Gaze. It is another important point that the reader shifts between different reading strategies in relation to the concrete picture. In this process the picture changes meaning. A picture is more than it shows.

■ Description of the project

The material for the experimental reception project consists of four newspaper articles. The topics of the articles are: High-tension power lines in relation to cancer and children; Long-term unemployment; Plastic bags in relation to pollution; Global Warming. The four topics are selected in order to make it possible for the readers to relate to them personally and emotionally (cancer and unemployment) or more emotionally distant topics (pollution and climate) with elements of speculation (climate) or direct relation to action (pollution).

Each article was constructed with four different pictures. The informant was visited in her/his home and was given one article with a set of pictures at a time and was asked the question: Which picture do you like the best? This very open question made the informant think and construct the values and criteria for evaluating the pictures in the context of the concrete article. Within a very short time (about half a minute) the informant had ranked the different versions from one to four. Then they were interviewed about their choices, their criteria for their selections and how they personally connected to the pictures. The whole interview situation was very informal. In order to take away the possible feeling of being examined, the informants were told that there was no correct answer. The procedure was repeated with the following three articles and then the informant was asked to rank the four topics in relation to each other.

The interviews were transcribed and analyzed. In the process of analysis, four main foci appeared: One focus contrasts three different people's readings in which they rank pictures that were very aggressive and digitally manipulated. These were seen in relation to one person's readings where he ranked the more conventional pictures. One of my hypotheses was that the more conventional and realistic pictures would be chosen by older people (40–50 years old) and that the more constructed and aesthetically surprising pictures would be preferred by younger people (20-30 years old). But to my surprise this wasn't that clear cut.

Another focus contrasts one person's reading and ranking of the more realistic pictures on emotional topics like High-tension lines and Unemployment; and the more speculative and action-oriented topics like Plastic bags and Global warming in which the more constructed pictures were selected. But it turned out to be more complex. Even the realistic pictures were seen by the readers as constructed reality and they function as a nearly empty frame for the readers' personal involvement with knowledge and emotive resonance. The readers do not use the picture as a proof, but as a mirror for themselves. This mirror is colored by their social and personal connotations, colored by the context and the transaction between picture, article and reader. When the topic and the picture are seen as threatening, the readers look through the threat and into the positive and happy elements in the picture and create a soft spot that makes it possible for the readers to stand the threat.

The third focus contrasts the mediated picture of unemployment to all sixteen informants' choice. The analysis shows the influence of the readers' personal knowledge and attitude and their ability to accept pictures and information that challenge their own situation and life.

The fourth focus is on the relation between what the informants see as important topics for themselves and how that reflects their choice of pictures. All the topics can be seen as communication research. As Giddens points out, the readers' ignorance gives foundation for doubt or watchfulness (1990). "Is it really truth? Is it a real story? It is very dubious!" But this doubt is neutralized through the readers' belief in what they want to be truth.

■ The findings of the project

In the Mirage project the empirical material of the ranked pictures and topics and the interviews with the informants have a high degree of complexity.

Through the theory of The Four Gazes this complexity is maintained. This can easily lead to seeing the informants' reading strategies as only individual readings. But it is possible to find a pattern in their readings.

Some readers have a habitus that is very narrow and can be seen as a rather closed system of solid schemes. What characterizes these readers is that they shift between the different reading strategies in this way:

1 The Locked Gaze

2 The Pragmatic Gaze

The locked gaze is exactly a search for recognition. It is a search for clichés and stereotypes. This does not mean that the reader cannot be critical towards the stereotype; criticism often happens by involving The Pragmatic Gaze and a focus on the personal self.

Other readers have a habitus that allows them to have many contradictions and challenges. What characterizes these readers is that they shift between the different reading strategies in this way:

1 The Opening Gaze

2 The Pragmatic Gaze

3 The Reflecting Gaze

The opening gaze searches for extension. It is a search for the aesthetically and substantially surprising and new. The pragmatic gaze is very elaborated in relation to personal use, the social self with focus on the community meaning and with a goal to be broadly enlightened. The reflecting gaze is used to reflect oneself in the "other" that is strange and surprising.

This sums up the patterns that reflect the readers' strategies. But it must not be seen as one gaze necessarily coming before another. It is not that simple. The informants do not explicitly formulate reading strategies. They are a token of how I interpret their processing of picture meaning in their specific context. Therefore it is difficult to say anything precise concerning a succession in the use of the gazes.

In the analysis I have focused on the striking aspects or the punctum of the picture. When Barthes uses the term punctum it is an expression of what hurts him (Barthes, 1981). But through the analysis of the interviews I revealed opposition to the punctum. One can call it the soft spot in the picture or maybe the sensitive area of the picture.

In a picture concerning the relation between High-voltage lines and cancer on children, one picture showed a sandbox with alot of playing children. One half of the picture showed the huge pylons with the high-voltage line. Many of the informants ascribe to this picture happiness, the look of the playing children and their expression of cheerfulness. Through this focusing on happiness they are able to look away or fail to see the threatening pylons. Of course they see them—but the sensitive area in the picture, the children, they transform into something that is so strong for them that the threat nearly disappears.

The sensitive area is also present in the picture of the man with the Beer-belly. He is not only seen as a loser, but the picture is transformed to a description of a real Dane. With this focus, the picture changes to more than just a picture of a loser. It becomes a loving picture that through its stereotypical depiction is well known—and the sensitive area opens the picture to another reading beyond the literal one. The sensitive area can be something in the motif, it can be part of the aesthetic of the picture—and it is a result of resonance with the reader.

The project shows that the readers are fully aware that they live in a digital culture. It is clearly expressed in the authenticity and trustworthiness of press photography in context. But it is a complex attitude the informants have. For some readers the authenticity is connected to the meaning that a photograph must never be altered digitally or physically. For more readers, the authenticity of the photograph requires that the persons and situations are depicted in such a way that the actors can recognize their own understanding of situations or persons. One can say that the ordinary focus on production circumstances makes the discussion of altering photographs important (Ritchin, 1990). But more readers focus in a sophisticated way on the use of the picture and the relation between reader and picture. By focusing on the use of pictures, the attention is displaced from the single picture to the use of all pictures in a digital culture.

■ The experimental reception project and experience

Reception projects normally take their point of departure in what can be called a naturalistic approach. They focus on ordinary media products like soaps or TV news and people are asked to reveal their readings and understanding of the programs (Jensen and Janowski, 1991) In this project an experimental element is the point of departure. Umberto Eco writes that it is a paradox that the only way one can achieve the real is to represent the absolute fake (1986). In this project the intention is to say something about the real reception by making a detour. This detour is through the experimental design.

The real is here the concrete newspaper article. The real is here in that the article refers to a concrete event or concrete information. But this authenticity is broken when the concrete article is supplied with four different pictures and through this false situation the foundation is created for the reader to construct the real. The Swedish researcher Olle Findahl writes that reflection and critical distance of the reader is unusual. The public is bombarded all the time with new information with the result that the individual hardly can reflect indepth. Most of the information must be taken as it is (Findahl, 1995:33). The experimental challenge is a challenge to the reader. Through this design the reader is prevented from doing what (s)he ordinarily does. The reader is provoked to value the four pictures in relation to each other to reach for a rejection of some possibilities and to accept one version.

The individual reader interprets and creates meaning from his or her model of the world. To what extent does one want to be confirmed in the conceptions one already has? To what extent does one want to get an extension of the conceptions about the world and oneself? To what extent does one experience the new information as threatening to one's identity? The project questions the way of thinking in communication about specific audiences and especially ordinary thinking in social and lifestyle orientations. In the mess of daily life and personal attitudes the project reveals the importance of what I have called the complexity of the schizophrenic and paranoid as extreme poles in the development and choice of reading strategies.

■ Perspective

The Mirage Project is interesting in several ways. It can first of all be seen as a methodological development of ordinary reception studies and it can be seen in relation to other experimental projects with different epistemological interests (Philo, 1990; Kitzinger, 1993; MacGregor and Morrison, 1995). The founding idea is to insert one or more layers before the qualitative interview. These layers can have the form of different versions as in The Mirage Project, but the main idea is to insert a bodily founded reaction that makes it possible to get into a level of experience not based in language. In reception studies, "Language in fact comes to equal both the tool and the object of research" (MacGregor and Morrison, 1995:143), but through an experimental approach it is possible to get closer to the experience of the informant.

Secondly, the discussion on how a picture theory can be developed, considers more than the picture itself and involves the ordinary readers' reading strategies in order to gather the complexity of the experience. In the project I have discussed the foundation of a theory, especially in the context of press photography, began by focusing on different questions generated by the project. The theory of The Four Gazes has shown a potential in grasping the complex creation of meaning in news photographs in their context. The theory of reading strategies can be transformed and used in similar projects.

Thirdly, the Mirage Project has revealed another way of looking at the use of photographs in the newspaper. Readers have a more sophisticated view regarding authenticity and trustworthiness, and by the minimized attention to conventional use of raw news photographs, the project has shown a more open attitude to a differentiated use of photographs with emphasis on a close relation to the context. A reception project with sixteen people can not be generalized, but the findings can serve as an inspiration for newspapers to experiment with new ways of using photographs.

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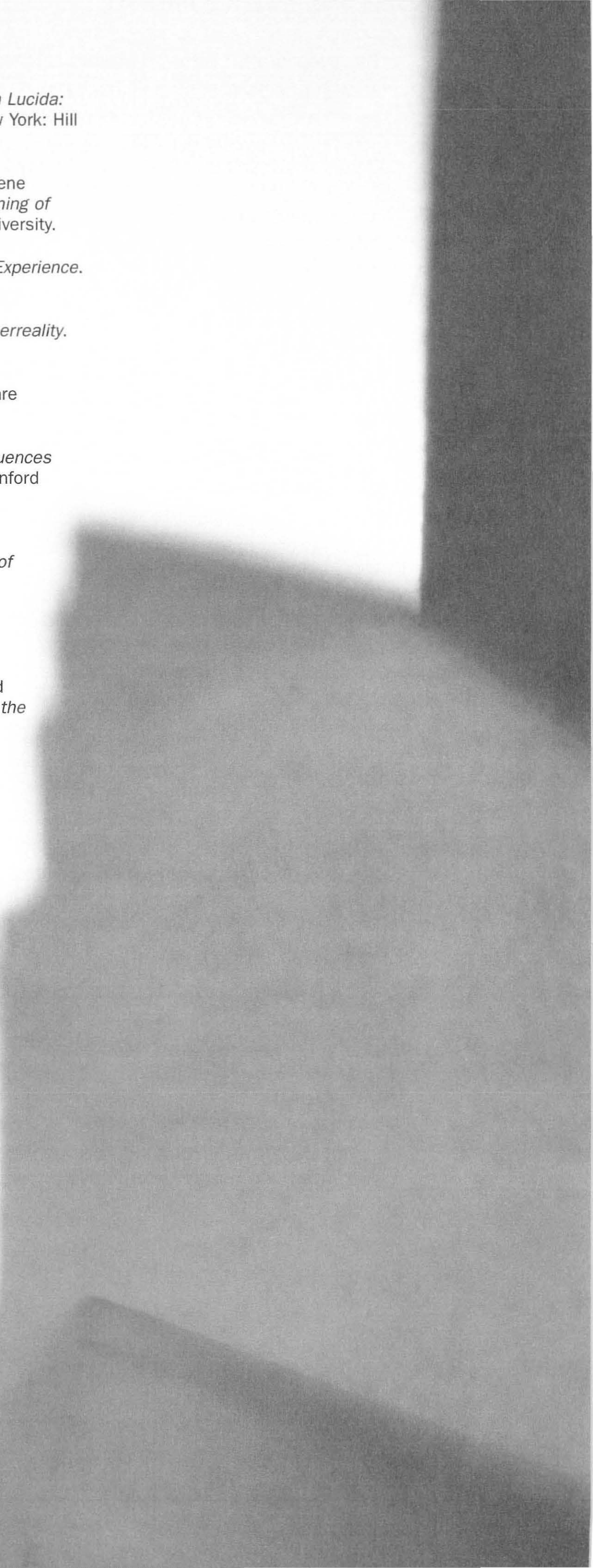

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Alix Lambert's
"The Mark of Cain"

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Visible Language 36.1
Golec, 48–61

Abstract

The following contribution is divided into two parts. The first part consists of a brief essay that describes the contents of Alix Lambert's film, *The Mark of Cain*. The second part is an interview with the filmmaker and artist. In the interview, Ms. Lambert discusses the differences between documentary filmmaking and conceptual art practices; she reflects on the nature of representation and examines the relationship between the symbolic content of Russian prison tattoos and the new Russian economy; and she compares the persistence of visual forms to the impermanence of meaning. That the two are interrelated is of special interest to Ms. Lambert, whose film records the vicissitudes of a faded visual idiom and reveals the non-identical sameness of form, homologically aligning tattoos and economic order. In both her video still-images and in her interview, Ms. Lambert attempts to make explicit what is inexplicit, all the while admitting to the disruptions, hesitations and gaps in doing so. In her film, a prisoner states that "You can learn a lot about a prisoner from his tattoos." In the hands of Ms. Lambert, we can learn a lot about tattoos from prisoners. And from tattoos, we can learn a lot about the decline of a culture.

The Mark of Cain, a feature-length documentary by Alix Lambert, explores the dying art of Russian prison tattoos to offer audiences an understanding of conflict and transition in contemporary Russia. Through intimate interviews that enable the prisoners to talk about their life experiences, body art and living conditions, a powerful story emerges of tension between prisoners of different generations and different social-economic systems. *The Mark of Cain* documents for the first time the disappearing artistic practice of Russian prison tattoos; further, the project investigates the nature of change in Russia by examining what is happening in the country's prisons.

As early as the 1920s, Russian prisons and Gulag began to attract the attention of researchers. The prisoners of the Stalinist Gulag, or "Zone," as it is called, developed a complex social structure that incorporated highly symbolic tattooing as a mark of rank. The very existence of these inmates at prisons and forced labor camps was treated by the state as a deep secret, and their tattoo art was considered a forbidden topic.

Since the introduction of Glasnost and the new freedoms of the press, striking figures have been published: from the mid-1960s to the 1980s, thirty-five million people were incarcerated. In the last decade, Russia's prison population has exploded; overcrowding has reached unimaginable proportions. Few other nations have had such a massive prison population. The most conservative estimates suggest that in the last decades, over thirty million of Russia's inmates have had tattoos even though the process is against the law inside prison.

According to *The Book of Genesis*, God placed a mark on the world's first murderer before sending him into exile. The mark of Cain proclaimed its bearer as a criminal and social outcast; for centuries, prisoners and those who broke social codes were forcibly tattooed. In Russian prisons, tattooing emerged as a visual mode of communication linked with social division. The startling and beautiful images of churches, cats, Christs, Madonnas, dolphins, bears and hawks, to name a few, became part of a secret, political language that allowed for clandestine communication both in and out of prison.

The Mark of Cain tells the story of a fading art form and how that practice's death reflects transition in broader Russian society. In Russian prisons there has been a "Code-of-Thieves." This criminal code is directly related to how prisoners earn their status in the prison community, and in turn earn the right to carry particular tattooed images that communicate who they are and their position within the social hierarchy. The godfather of the Code-of-Thieves is the "Thief-in-Law." In Russian prisons today there is major conflict concerning how prisoners achieve their status. Older prisoners are committed to the practice of tattooing and a Code-of-Thieves in which status has to do with one's behavior as a criminal on the outside, in the legal system and in the community of prisoners. Younger prisoners seek to purchase high status in the prison community. The younger generation is less interested in tattooing.

The prisoners raise crucial questions about expression, resistance, redemption and social division. *The Mark of Cain* intervenes into discussions that concern: Russian society, prison reform, resistance and artistic expression and transition in world systems.

Michael Golec: I'm very interested in the disparities between your documentary activity and your art-making activity. Do you see any difference?

Alix Lambert: I think that the difference is less acute for me than the difference may be for other people. That is, other people perceive a line that isn't as clear to me.

MG: Do you mean a lack of definition between the two activities in your own work, or are you referring to a lack of difference between the traditions of art making and documentary making from your perspective.

AL: I'm referring to how I view my own work, be it art or documentary. To me, the content of my art is very similar to the content of my documentaries. The difference lies in execution. I didn't want to make a conceptual art piece; I decided to make a documentary film because *The Mark of Cain's* subject matter suggested an alternate means of representation.

MG: What were the issues that caused you to make this decision? Was it the political content? The geographical location? Or, was it the entire scope of the problem—geopolitics, economics, post-soviet identity construction—as you saw it, that necessarily required an alternative format? And, why was it that conceptual art was too restrictive, if indeed that was the case?

AL: It wasn't that conceptual art was too restrictive. I have to admit, I based my decision on intuition. I felt more comfortable approaching the subject as a documentary rather than as a conceptual art piece. In general, I don't feel the need to make a choice. Its really a matter of appropriateness.

MG: Do you consider the documentary form to be an altogether different means of expression? That is, did the content influence the form in a manner that was unavailable to, as you say, conceptual art?

AL: I think it's different. And, I think for me, at least with *The Mark of Cain*, I was more interested in the audience that a documentary draws. With a documentary, you're reaching a different audience in a different way. The art world is so specific; it draws a specific audience, an audience I didn't want for that project.

MG: I assume that when you began work on *The Mark of Cain* you didn't anticipate that ABC's *Nightline* would eventually air excerpts from the film.

AL: No, I didn't know. In fact, when I first initiated the project, I didn't know if I would even get into a Russian prison.

MG: I'd like to return to the problem of gaining access to the Russian prison system. For now, however, I'd prefer to address the expansion of your audience. Because, indeed, the documentary has availed you to an audience that you may have never had up to the point of making *The Mark of Cain*. Traditionally, documentaries are targeted to specific audiences, much like the art world. But, as it happens, you've actually transcended the documentary audience as well as the art world audience.

AL: I was lucky to have had the *Nightline* segment. On the other hand, I've had a really hard time getting any kind of theatrical lease here in the United States, or even a complete airing of the documentary on television for that matter. It seems much easier in Europe for some reason.

MG: To what do you attribute this problem? Why is it so difficult in the United States to show *The Mark of Cain*, either in theaters or on television?

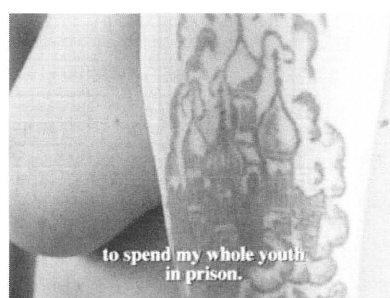
AL: It's the subtitles. A lot of people don't want subtitles here.

MG: When you bring up the problem of subtitles for an American audience, the problem actually lies with the location of the documentary; that is, post-Soviet Russia. What led you to Russia, and more specifically, the subject of tattoos in a post-Soviet Russian penal system? I should add that you have also produced your own tattoos as art pieces. How did that come about?

AL: My original interest in this subject began eight years ago. I spent a lot of time researching the topic of Russian prison tattoos and trying to raise money for the documentary's production. Actually, the man who became my fiscal sponsor, who runs a place in New York called the "Body Archive," is the person I found who had all the books on Russian tattoos, books that I couldn't find anywhere. He is also a tattoo artist and runs a place. So, we were working together on the documentary and the tattoos I made as art pieces came out of spending time with him.

MG: Was it the illicit nature of the Russian tattoos that attracted you to the project? And did the private nature of tattoos in general lead you to making your own tattoos? I ask this because it seems to me that your work both literally and metaphorically enters some very intimate spaces, with the ultimate goal of making those spaces public. But there is always a limit to how public those spaces become in your work. I'm thinking specifically about *Wedding Project* (1994). The question of consummation is implicit, but never answered either in the negative or the affirmative.

AL: Well, the *Wedding Project* wasn't about consummation, or privacy *per se*. Under everyday circumstances, I wouldn't ask a married couple if they had consummated their marriage.



MG: That's true. But, in deference to propriety as such, you've put your finger right on the problem. Indeed, the question of consummation would rarely come up in everyday conversation. One doesn't ask these things. However, you beg the question once you took marriage up as the focus of an art piece. Now, in the case of *The Mark of Cain*, the issue arises because you expose a practice that was hidden from public view, even hidden from legitimate researchers. Is this a common theme in your work?

AL: Not on a conscious level. I see it now that you point the theme out, and I'm not adverse to the idea that I'm attracted to the private made public as a conceptual thread that runs through my work. That being said, I realize that my most recent work, a film about flying commissioned for a new PBS series, departs from that subject.

MG: As I understand your work, you're interested in the construction of personae, of identity. And your project, in the most general sense, seems to me to be a kind of anthropology, at least on the conceptual art end. In most cases you're literally in the artwork. I'm thinking again of *Wedding Project* where you are investigating the legal and emotional boundaries of the institution of marriage and divorce in the United States by marrying and divorcing several individuals in quick succession. On the other hand, you don't physically appear in *The Mark of Cain*, although the film expands your anthropology even if it appears more conventional than your conceptual artworks. What I'm trying to get at here is whether or not there is a marked difference for you between the two, between the documentary and the conceptual artwork in light of anthropology?

AL: There is a tradition of documentary filmmakers who put themselves into the film. But, I feel like it would've been bad; it would've *looked* bad. An American woman walking around takes away from the viewer's sense of being there. I wanted to allow viewers to feel like they were in these prisons.

MG: Do you consider the look, or aesthetic, of your work to be instrumental in achieving a particular goal? In otherwords, does the look of your work contribute to your audience's aesthetic experience? Are the two causally connected by your intentions to achieve a particular goal?

AL: Yes, yes, and yes. The tattoos are beautiful, and the prisons are like churches or monasteries. Aesthetic experience is central to my work. My current project, the flying piece, incorporates my presence. I'm in it. The subject matter is a world away from *The Mark of Cain*, but it's no less aesthetic in its intent. It's my journey to flight. The audience will accompany me in my journey, and they'll learn about becoming airborne. *The Mark of Cain*, on the other hand, wasn't about *my* journey through the Russian prison system. The film was about the prisoner's journey, which has its own aesthetic qualities.

MG: I assume that you were actually present while the film was being made. You were just off camera.

AL: I was there. I was sitting there interviewing the subjects. I had a translator and a production manager who assisted in the on-site production. But, I was there, just not on film.

MG: No doubt. As I watched your film, I, as a viewer, had the distinct feeling that you were present. But because you were off camera, I also felt like I was there as well. Or, more precisely, I was allowed greater access to your interviewees because they were addressing me as viewer (rather than as interviewer). I somehow became your surrogate. Or, maybe it's the other way around? In any case, the level of intimacy is increased somehow by your physical absence. I wonder if there isn't a more banal or mundane explanation for my sense of being there, something that contributes to the phenomenology of viewing *The Mark of Cain?*

AL: Before I traveled to Russia, the woman who was my production manager made a trip to work out where there were people who had the tattoos that I was looking for and who had interesting stories. And then, once I arrived, we kind of tried to go via an official route, but, that wasn't successful. Although, we did obtain some official authorization that allowed us to do some things. But, in order to get everything that we wanted, we just spent a lot of time socializing with prison wardens. There was a certain amount of preplanning, and then there was a lot of chance, a lot of luck and a lot of vodka. A considerable amount of vodka! But not as bribes. I have to say, we didn't end up bribing any official. The wardens were our hosts, which, in the end, allowed us to do what we wanted to do.

MG: What do you think the wardens' interests were? Why were they so hospitable?

AL: It was a combination of things. When we first arrived on site, the officials had set up stuff that they wanted us to see. It took awhile to get them to feel comfortable showing us what we wanted to see.

And then there was our decision to travel really far outside of Moscow. We got the runaround in Moscow. So, we traveled to areas in the country where there wasn't a lot of foreign press—Perm and Samara, for example. And, to some extent, there was an element of boredom—like, Who are these visitors?

Also, there was a lot of vagueness on our part about what it was that we were doing. I definitely stressed that I was interested in the tattoos, which I was. But, I didn't say that I wanted them to be a kind of window to, you know, horrible prison conditions and what's going on in Russia. And, my crew was all Russian, which was really to my benefit. I think that it was also to my benefit that I was female. They viewed me as non-threatening and there was a certain cultural.... It wasn't like a group of American men wanting to make a movie. It was kind of like, here's this American woman, with a Russian film crew, who's interested in tattoos, so let's let her do whatever she wants.

MG: How were you able to get the prisoners to talk about their tattoos? Was that a difficult part of the production?

AL: I was told consistently that they wouldn't talk. I didn't want to speak to anyone who didn't want to speak to me. Every prisoner and prison authority that you see on film were all people who volunteered to talk to me. It's pretty obvious, you can see a breakdown of who would talk and who wouldn't talk. We have a lot more authority figures than prisoners speaking to us. I'm sure there were fewer consequences for those individuals.

MG: I'd like to turn our conversation to the content of *The Mark of Cain.* I'm speaking specifically about the transition from Soviet Russia to post-Soviet Russia and how that transition effected the production and meaning of tattoos in the prison system. The implications of the shift in symbology is really quite fascinating, especially when that shift is enacted under pressures from a new Democratic Russia that has embraced Western style economics. Is there really a shift, a formation of a new tattoo language?

AL: I felt like that was ultimately what the gist of what all the prisoners had said about the difference between the older prisoners and the younger prisoners, how they conduct themselves and how tattoos reflect that conduct.

MG: Yes. In fact, if I'm not mistaken, a prisoner towards the end of the film said something to the effect that his tattoos were meaningless under the new economic order. As *Nightline* host, John Donovan stated, "...this story is a fascinating and powerful tale not just about tattoos and not just about prison life, but about Russia itself and the enormous changes it has been through and is still going through." Certainly, the trope of the prison as a micro-version of the larger social body isn't unusual.

AL: Right. One of the prisoners actually says that the prison is a model of the state.

MG: Was there anything beyond the lens, as it were, that confirmed this view more powerfully? Let me put the question another way. Was the situation such that you were allowed access to the prison and the prisoners precisely because of the new economic order and its having successfully rendered the old style Soviet tattoos meaningless?

AL: Yes. The two criminologists that we spoke to had forty years of documentation of the old style Soviet tattoos, but they were never allowed to show this material, or they never felt comfortable showing this material. Now, all of a sudden, they can show us this, and they want to show us this.... Because the style is dying, if not already dead.

MG: Does this current situation, the revelation of what has long been repressed, trivialize the old style tattoos? Are they now just remnants of the past—impotent—and, is our view of them utterly nostalgic? Let me put it this way: Do the tattoos have any currency today?

AL: The old style tattoos will be lost completely. That is one of the interesting things about this historical moment, this moment of change. If we look back after thirty years time, anyone who possessed the old style tattoos will be dead. That's the end of that! The new generation of prisoners may have tattoos, but they're the kind of tattoos that Western teenagers get.

MG: The work that you've accomplished, the documentary, will allow those tattoos to live on beyond those physical bodies.

AL: I hope so.

MG: Speaking of bodies. Were you satisfied with the film's translation of your experiences in the prisons? I ask this because it strikes me as relevant to the distinction between conceptual art making and documentary film making. Is one medium more successful in its representation of everyday experience?

AL: To the extent that one's experience is never fully transferred to film or writing or whatever else one happens to create, no. In the sense of looking at the footage for the first time, I was struck by the fact that the temperature wasn't there, that the smell wasn't there, that the whole visceral experience wasn't there in the film. Its one thing to see something on film. It's another thing to be on site all day, to talk to these people, to have them give you gifts, to have this overwhelming experience. One tries the best she can to translate all of that to film.

MG: Is this a problem with representation in general? By producing documentaries, are you attempting to break down a barrier, or are you resolved to having it be in place? And does the nature of representationality, for you, place the documentary film closer to art than it is to mere reportage?

AL: Is representation a problem? No, I don't think it's a problem to the extent that I would give up making documentaries. With the exception of some advanced kind of virtual reality, I'm not going to satisfactorily recreate an experience for an audience. As a filmmaker or an artist, I try to find some truth in the fiction that I'm creating. I feel fine about that—let the barrier stand.

MG: Is there something about the content of *The Mark of Cain*—that it's, in part, about bodies—that increases the stakes of representationality?

AL: A number of actual prisoners addressed this question. They said that one doesn't always express oneself with words. And as an inmate, a body is all that one has. That's a mode of expression. I'm not sure if that was adequately conveyed in the film, however. In any case, that's my sense of tattoos in general. A tattoo is a reflection, or an expression, of a personality, even if it's a tattoo that everyone else has.

Really, I'm not a tattoo artist, at least not in the conventional sense. I kind of learned how to do it, and then did fifteen tattoos and documented them as a learning curve. But that was more in the realm of a conceptual project. Let's just say that I never intended to set-up shop. The people who I tattooed were very aware of the project's status. They had their own reasons for having me tattoo their bodies. That was important to me. I didn't want to work with anyone who wanted the best tattoo.

MG: Do you see any correspondence between tattoos and artworks, especially where the hand of the artist, the inscription, becomes the primary site of appreciation? In one sense, as you've stated, tattoos are expressions of the person adorned with the image, but do you feel that tattoos are also expressions of the artist's personality?

AL: Actually, I believe that it's more of a collaborative effort. But there's a lot of gray area in regards to the percentage of effort in the collaboration. I didn't choose the images that I applied to my subjects. There are tattoo artists who decide the form and content of the image. There are also tattoo artists who only do freehand applications. I, on the other hand, used stencils of images given to me. More than anything, I think that trust is involved in all cases.

MG: Was trust the central issue in the Russian prisons? I'm thinking specifically of one prison tattoo artist who had a reputation within his cell-block.

AL: Most of the prisons only had one or two tattoo artists. It's not the case that everyone does it. One has to find that guy.

MG: Is it the case that that one prisoner possesses the lexicon of symbolic language of the tattoos? Or, is it the case that most of the inmates possess some knowledge of the symbolic language of the tattoos?

AL: All of the prison inmates know what the tattoos mean. Each has to get the tattoo that applies to him.

MG: Does appropriateness override style? Will an arbitrary application of certain tattoos lead to trouble for an inmate inevitably?

AL: Yes. There was a prisoner who had the "killer" tattoo removed because he didn't want to be identified as a killer. Misrepresentation was a major concern for the older prisoners. The tattoo had to fit the station. This isn't a concern for the "new Russians." That's where the division started. A lot of the older prisoners refered to a time when one would be killed for such an indiscretion. But that situation is waning. It's really only the older generation of inmates that adhere to such a code.

MG: What kind of tattoos do the "new Russians," as you say, prefer? Is it an amalgamation of Western style and old-style?

AL: We saw people with both. The Japanese style tattoos and American style tattoos are very popular. Although, we did see these styles combined with the old-style prison tattoos. I should add that there are prisoners who forego tattoos altogether. But, for those who have tattoos, the trend is moving toward decoration.

MG: Would you go so far as to say that the adoption of American and Japanese style tattoos signifies an appropriation, or an acceptance, of American and Japanese economic power? Would the prisoners rather be identified with money rather than with honor?

AL: I don't know. It makes sense to me, but nobody expressed it that way. It's understood as strictly a style preference.

MG: Isn't that the underlying problem? The "new Russians" view their choice as merely decorative, as having little if any symbolic merit. But it's really that their choices signify a desire for economic affluence, something quite vulgar and out of step with the Soviet past in the eyes of the older generation. The older generation's tattoos were intertwined with a perceived order and regiment of the Soviet past, especially in light of the growing chaos in a Democratic Russia.

AL: Yes. Listening to the older prisoners is like listening to someone's parents. You know, "Ahh these kids!" Which is kind of odd to me, because, according to the older prisoners, there are no *good* murderers anymore.

MG: There was a term that the prisoner used to refer to their brotherhood.

AL: A "Thief in Law." The term doesn't mean that one is a thief necessarily. Rather, the term means that one adheres to a code of conduct. A Thief in Law has to earn his position, which is ignored by the "new Russian" criminal. Now, if a criminal has some money he can buy his status as a Thief in Law, regardless of the rules of conduct. More than anything, that's what disgusts the older prisoners.

MG: They're the *nouveau riche* of the Russian prison system.

AL: Exactly.

MG: Again, it's nostalgia, a sense of loss, that permeates the documentary. I find this especially ironic since it seems likely that the prison population felt the brute force of the old Soviet system. Am I being too reductive? Were you able to interview any political prisoners, holdovers from the old days?

AL: No. We didn't interview political prisoners. They don't get tattoos. Except Valeri Abramkin, he runs the center for prison reform. He was a political prisoner, but, now he's out of prison. Anyway, I didn't anticipate that prisoners would view the old system as being better.

MG: I assume that if political prisoners did have tattoos they wouldn't have the same meaning as those worn by the Thieves in Law. The reasons for incarceration are quite different, whether the government admits to it or not. The political prisoner may be considered an outlaw by the state, but he or she isn't a thief by any conventional definition.

AL: Exactly. The two don't live by the same code.

MG: Speaking of distinctions within the prison system, I noticed that *The Mark of Cain* focuses on men almost exclusively.

AL: Yes. That was another decision I had to make during the course of production. Actually, there will be a second *Nightline* that will focus on women prisoners. The film didn't focus on women inmates because of tattoos, which are less prevalent in the women's prisons. Also, the tattoos don't indicate status like they do in the men's prisons. As a consequence, the women's tattoos are less interesting. And, they're less artistic because they don't have the shavers [wind-up razors used by male prisoners to create tattoo guns]. So, we saw a lot less tattoo activity. There was a lot of other interesting stuff, but I didn't use it for the film because I was trying to maintain a thread. I did shoot a good amount of footage that focuses on the women's prisons, which will be shown on *Nightline*.

MG: In short, the tattoo theme of the film limited gender exposure.

AL: It did. But, there were a number of tangential themes that we simply couldn't follow in the one documentary. For example, there was a really interesting criminologist that didn't make his way in because the additional story would have taken the film too far off course. It's not uncommon to find a lot of interesting material on the editing room floor.

MG: Regardless, the clarity of your film adds to its critical force. *The Mark of Cain's* power lies in its exposure of radical cultural upheaval at the subcultural level of prison tattoos and their meaning. To see the shift marked, as it were, so clearly is rare in accounts of post Cold War histories. Furthermore, the film literally embodies, or bodies forth, the manner in which economics structures communication. Or, how it is that economics becomes a dominant language itself, draining all competing languages of meaning. There's a non-redemptive, sobering quality to your film, a quality that puts a great deal of pressure on the subject, not only of communication, but of identity and selfhood. The making, or construction, of an identity is not a pleasant thing to watch. What you've shown is that one can lose the means to construct his or her identity. It's remarkable how palpable that sense of loss is in your film.

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Ancestor of the West. Writing, Reasoning, and Religion in Mesopotamia, Elam, and Greece

Jean Bottéro, Clarisse Herrenschmidt and Jean-Pierre Vernant

Carol F. Justus

With a Foreword by François Zabbal, Teresa Lavender Fagan, translator. Chicago: University of Chicago Press, 2000. 194 pages, Illustrated, Hardbound, $25.00, ISBN 0-226-06715-7

Abstract

This small, elegantly written book, offers three distinct perspectives on civilization as it emerged in the more familiar ancient Greek tradition from antecedents in the Ancient Near East. Bottéro's "Religion and Reasoning in Mesopotamia" (Part I:3–66) outlines themes that arose as the cuneiform tradition evolved in the hands of Sumerian and Akkadian scribes, while Herrenschmidt's "Writing between Visible and Invisible Worlds in Iran, Israel, and Greece: (II:69–146) characterizes conceptual changes in the transition from the cuneiform script based on a mixture of phonetic (syllabic) and non-phonetic (determinatives, logograms) signs to the phonetic alphabet on which Greek was based. In "Writing and Civil Religion in Greece" (III:149–175), Jean-Pierre Vernant compares the Indo-European-speaking heritage of the Greeks and with traits that emerged as Greek culture made uniquely Greek contributions in contact with the non-Indo-European cultures of the Ancient Near East.

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These essays are intended to dispel the notion that a "western" tradition sprang fully clothed from the head of Zeus not long before fifth century BC Athens. Fagan's translation makes this book easily accessible to the nonspecialist, and Zabbal's forward (vii–xii) situates it in time (beginning in the fourth millennium BC) and space (Mesopotamia peopled by Sumerians, Akkadians, a culturally changing Iran and Greece) raising questions about whether thinking can really be characterized as "(middle) eastern" or "western," as is often done. Bibliographical references are confined to brief footnotes (177–178) and a very selective "Bibliography" (179–181) with an index of names and concepts (183–192).

■ I.

Bottéro, the Assyriologist, emphasizes the cultural continuum that comes with the spread of written traditions, the first of which was the cuneiform conflation of Sumerian and (Semitic) Akkadian culture. Four succinct chapters (1: "The Birth of xCivilization" 3–18; 2: "The First Writing" 19–33; 3: "The Intelligence of the World", 34–50; and 4: "The Gods: A Reasonable Religion," 51–66) develop themes related to writing and reasoning as they arose from the everyday lives and institutions of Mesopotamian, Sumerian and Akkadian speakers.

Fundamental is the coalescence of two distinct groups, Sumerians and the Semitic-speaking Akkadians. By the time Sumerians and Akkadians had independently arrived in the lower valley of the Tigris and Euphrates Rivers, the places from which they came were buried in prehistory. From their interaction between the two rivers (in "Meso-potamia" based on Greek *meso-* 'middle' and *potamos* 'river'), loan words from one language to the other reflect cultural borrowings. The writing and gardening Sumerians gave Akkadians their word for 'tablet' (Sumerian *dub*, Akkadian *tuppu*) and 'garden' (Sumerian n u . k i r i , Akkadian *mukaribbu*) while the herding, warlike and highly religious Semites gave Sumerians their words for 'herdsman, shepherd' (Akkadian *nāquidu*, Sumerian n a . g a d a), combat (Akkadian *tamḫaru*, Sumerian d a m . h a r a), and a pantheon with transcendent deities such as Akkadian Shamash (sun-god), Adad (storm-god) and Ishtar (goddess of war). Building on the initial creativity of the Sumerians and their role as teachers for the Semitic-speaking Amorites from the north and west, Bottéro emphasizes the Akkadian genius that maintained the culture and allowed it to spread over three millennia. The clay tablets inscribed with cuneiform signs preserved texts as diverse as prayers, omens, letters, economic transactions, royal deeds, poetry and school boy's lessons, and their Akkadian and Sumerian originals were translated into languages as diverse as non-Indo-European Hurrian and Indo-European Hittite. Often copying and translating Sumerian epics such as the Gilgamesh epic, scribes across the Ancient Near East made it their own. In regions of the Ancient Near East as close as Elamite Susa (Iran) or as far removed from the southern valley of the Tigris and Euphrates Rivers as the Hittites of Central Anatolia (east of modern Ankara) and the West Semitic dialects of Syria, the cuneiform writing system carried the culture of Sumer and Akkad. Bottéro presents evolution in writing technology and reasoning methods as a foundation of civilization on which the West later built.

Writing, which is very recent (c. 5000 years old) by comparison with prehistoric traces of human habitation in the Ancient Near East that go back to c. 70,000 BC (Bottéro 7–17), evolved from an early proliferation of pictographic signs into an abstract subset (20–26). This subset combined phonetic and semantic values to record three-millennia-old civilization (c. 3200 BC to the last cuneiform tablet of 74/75 AD). Using the cuneiform writing system, scribes catalogued, classified and reasoned about their world. By the time of Egyptian Akhenaton, the Akkadian language, written with the cuneiform script, had become the international diplomatic language of Great Kings from Egypt and Babylon to Assyria, Palestine and Hittite Anatolia.

Bottéro's discussion of the evolution of writing from pictograms to phonetic symbols using terms "pictogram" or "ideogram" emphasizes the artistic origins of writing. He elucidates the generally accepted view that signs for such words as Sumerian ti, which are homophonous for meanings 'life' or 'arrow,' paved the way for the phonetic interpretation of erstwhile pictograms (Bottéro 22–24). The situation, however, is more complicated.

On the one hand, use of the term "ideogram" simplifies the transition from a system of pictograms independent of the units of a spoken language (if such ever existed) to signs intended to write a language phonetically. The meaning of "pictograms" allowed them to be "read" as words with different phonetic values in different languages. So the TI sign would be pronounced in Sumerian as t i and, depending on the context, interpreted as the word for 'life' or 'arrow.' An Akkadian scribe, however, "reading" its meaning as 'life' would pronounce the Akkadian word *balātu*, while a Hittite scribe would pronounce *ḫuišwatar* for 'life.' Because of this word-sign equivalence, many scholars prefer Gelb's (1963) term "logogram" to "ideogram" because such signs are interpreted as words, not abstract ideas.

Moderns numerals such as '2' for English 'two' and '2nd' for 'second' make use of processes familiar to cuneiform scribes. Speakers of different languages today using Arabic numerals may pronounce the symbol '2' as Spanish *duo*, French *deux* or German *zwei*, as well as English 'two,' and French speakers will complement it '*2ième*' for *deuxième* as opposed to English '2nd' or German '*2te(n)*' for *zweite(n)*.

On the other hand, early art was not alone in prehistory. As early as the Neolithic (c. 8000 BC) clay tokens, as forerunners of writing, were used as devices for keeping records of agricultural and other surpluses. Impressions of their shapes onto "protoliterate" cuneiform tablets refined the economic accounting role of tokens and led to the invention of cuneiform writing. Schmandt-Besserat (1992:6–11; 161–164) pointed out that tokens were not models of the commodities that they represented but already arbitrary abstractions, that their impressions were yet another step in abstraction from the concrete commodity. With the evolution of Sumerian logograms we thus have quite abstract symbols, no longer "pictograms" or "ideograms."

When tokens began to be impressed on clay tablets and used with mathematical values, the visible symbol on clay also did not unambiguously refer to one linguistic (or mathematical) unit. They did not unambiguously "write" the words of a language. As studies of the preliterate mathematical systems have shown, values of impressed shapes depended on their rank-ordered use in a system for quantifying a particular kind of commodity (Damerow & Englund 1987; 1989; Nissen, Damerow, & Englund 1990:61–75). For quantifying grain the large circle was the fourth unit in a rank ordering of units similar to our 'bushel' or 'quart,' the small circle the third unit with numeral equivalents of 300 and 30. In the system for measuring fields, by contrast, the large circle was the largest unit, the small one the fourth unit, each with numeral values of 10800 and 180, which were probably about as frequently referred to as our 5280 feet for a mile or 36 inches of a yard (see also Justus 1999:58–60). Such logograms for quantity undoubtedly referred to a multiplicity of Sumerian quantity words so that their visible "written" forms may have been early cuneiform "homograms" much as English 'there' and 'their' are modern homophones.

In his broad survey, Bottéro glosses over details of the origin and evolution of writing that are now well-known in English-language publications (Schmandt-Besserat 1992; 1996; Damerow & Englund 1987 passim) and under continued investigation now by an international team of scholars united by mirror websites at UCLA (http://early-cuneiform.humnet.ucla.edu/archaic/index.html) and Berlin (http://cdli.mpiwg-berlin.mpg.de/), leaving them for Herrenschmidt to touch on below. Details of the transition from a semantically based set of symbols to symbols with phonetic values that recorded a particular spoken language, however, are still problematic.

Like writing, according to Bottéro, methods of reasoning also have their roots in cuneiform scribal traditions. When scribes used their new script to preserve records of economic transactions, they also found that other things could be so preserved for future use. Among them were precedents of unusual natural phenomena that might be taken as 'signs,' a kind of 'writing' from the gods. When such 'signs' occurred, they were correlated with the fortunes of humanity. These included celestial 'signs' and anomalies in the birth or behavior of animals and human beings. Immense numbers of these signs correlated with observed events were recorded in formulas of the sort "When a two-headed calf is born, famine occurs" or "When a sacrificial lamb has an odd spot on its right liver lobe, the army wins its campaign." Such collections of precedents are preserved, not only on standard clay tablets, but also on clay models of livers used in divination.

Such formulae, preserved on as many as thirty thousand tablets, suggest an early attempt to find necessary connections between the known and unknown events. Notions of cause and effect and syllogistic reasoning would remain for later centuries to develop, but when Bottéro suggests that this recording of events that seemed to be linked in a temporal order was the first step toward legitimate generalizing from past instances to general principles (43–50), it is intriguing. If at first conclusions were naive and primitive, this kind of activity and resultant reasoning, as he argues, must have preceded notions of cause and result that underlie the scientific method based on observation. From observed precedents, Mesopotamian specialists drew conclusions about things they wanted to know, things such as future events.

Legal decisions too were first recorded as precedents that could be used to resolve subsequent problems ("If a man puts out another man's eye, they put out his eye"). On the basis of such bodies of knowledge written in cuneiform on clay tablets, Ancient Near Eastern rulers (and their scribes) ran an organized society that spread literacy throughout the known world for millennia. Our modern institutions too are based on organized bodies of literature and our methods of scientific inquiry attempt to begin with the known and proceed to the unknown in a process that has built on principles of empiricism. Painted with Bottéro's broad strokes, the essence of his generalizations rings true.

■ II.

In the second section Herrenschmidt turns to an equally ignored chapter in western culture, that of Iran, a modern Islamic state, with roots in ancient (Indo-European) Persia and its non-Indo-European precursor, Elam.

While writing was evolving in ancient Sumer, related developments were also taking place in Susa (modern Iran), on soil where the earliest attested language was Elamite. Elamite was a language perhaps related to the non-Indo-European Dravidian languages of India such as Tamil, perhaps not. Over the same three millennia that Semitic speakers spread Sumerian and Akkadian traditions west, the Elamite rulers of Iran were replaced by Indo-European Persian speakers, mixing their Mesopotamian cuneiform heritage with Old Persian Zoroastrian traditions before becoming part of the Hellenistic Greek empire of Alexander the Great (4th c. BC) and, in more recent times (7th c. AD), coming under the religious influence of Islam.

Herrenschmidt's "Elamite Civilization and Writing" (Chapter 5: 69–89) recalls the early proto-Elamite script which paralleled developments in late fourth, early third millennium BC Sumerian Uruk. For her, Schmandt-Besserat's preliterate tokens, as "calculi" led via impressed tablets to cuneiform writing, at Susa "the path toward writing" perhaps even "more clearly" attested (p. 71) in impressed bullae, hollow clay balls with token/calculi and seal impressions on the outside and related tokens on the inside (pp. 72–73). Her account of the evolution of the data at Susa follows that of Schmandt-Besserat (1992; 1996), reproducing (Figure 5 p. 74) material said to be taken by "permission of the author" from Schmandt-Besserat (1992), a reference which, however, did not make it to the Bibliography (179–181).

Herrenschmidt's account of the Elamite calculi from Susa, where writing is generally agreed to be an offshoot of developments at Sumerian Uruk, sketches for Elamite writing essential developments that Schmandt-Besserat (1992; 1996) worked out for the steps in the origins of writing based on sequences at Uruk. Schmandt-Besserat (1992:181–182) had argued that the evolution of bureaucracy, quantification and writing developed together, first at Uruk, and then spread as a system to Susa. When complex tokens were found outside Uruk, they were intrusive from Uruk IV, not a natural outgrowth of local (non-Sumerian) evolution (e.g., Schmandt-Besserat, 1992:182–183). At Uruk, token use, then tablets impressed with token shapes beside drawn pictographs evolved (see also Powell, 1981 who attributed the invention of writing to a scribe at Uruk c. 3200 BC). As Herrenschmidt (77–78) notes, however, the "proto-Elamite" pictographs at Susa (before c. 2900–2800 BC) differ in form from those at Uruk and thus pose Elamite decipherment difficulties, particularly as they are without the successors at Susa that Sumerian forms had at Uruk.

> Early complex tokens, which came to serve speakers of Elamite as well were so arbitrary yet similar that they were identified as having a common origin in Sumerian Uruk (Schmandt-Besserat, 1992:182–183). Only when signs could be shown to have phonetic as well as symbolic values can we assume that scribes were pronouncing words and phrases corresponding to the signs that they were writing. By that time Sumerian and Elamite signs had evolved quite separately.

Despite problems that remain in deciphering the Elamite material, Schmandt-Besserat's emphasis on the dated archaeological sequences at Uruk with their parallels throughout the Ancient Near East and Herrenschmidt's sketch of the data of Elamite "calculi" both point to an essential origin of writing in an accounting procedure. Writing (for Herrenschmidt 81) began when "calculi" shapes were "made visible" on the outside of the bulla which contained the concrete shapes. From this perspective, writing began when bureaucrats worked out a way to record quantities. To fill gaps of detail that Herrenschmidt's sketch leaves, one should turn to Schmandt-Besserat's (1992:129–154; 1996:55–83) discussion of the rise of impressed tablets and the relation between token shapes, tablet impressions and pictographs.

While many problems remain, it seems clear that for a period between 2800 BC and the conquests of Sargon I of Akkad (2334–2279 BC) before relations between Semitic Akkad and Susa were (re-)established, writing at Susa disappeared. With renewed contact after Sargon, Elamite scribes simplified the Akkadian cuneiform script for recording Elamite documents and used both Akkadian and Elamite to record important treaties. If this is so, then writing in Iran was, with the exception of the Old Persian script, borrowed from elsewhere, from earliest versions of cuneiform, to consonantal Semitic scripts used to write Aramaic, Hebrew and the modern Arabic of Islam, as well as the Greek alphabet of earlier periods.

Chapters "Consonant Alphabets, the Greek Alphabet, and Old Persian Cuneiform" (6:90–107) and "Old Persian Cuneiform: Writing as Cosmological Ritual and Text" (7:108–125) attempt to explain the Old Persian cuneiform as a semi-consonantal alphabetic script designed, not only for political purposes, but also shaped to emphasize the role of Ahura Mazda in Old Persian politics, while Chapter 8, "Writing—and Some Thoughts on Hebrew and Greek" (126–147), continues this theme, arguing that the Hebrew consonantal alphabet was well designed to hide the full name of God, for example.

Herrenschmidt's approach to the history of a region via its evolving scripts (and multilingual speakers) emphasizes the continuity of intellectual tradition by contrast with the usual historical focus on events from the perspective of new empires which successively replace each other in the region, the Babylonians, the Medes, the Persians, the Seleucid Greeks, Alexander the Great, the Parthians and the Islamic Arabs.

For the Achaemenid (Persian) period of Iranian history, she points out that one must deal with a large range of scripts and languages in addition to the Old Persian script used for inscriptions (111). Besides the Old Persian, scribes used contemporary Elamite (written in cuneiform) and Aramaic (written in a Semitic consonant alphabet), for example. Raising the question as to the permanence of a civilization "that recognizes itself in such varied writing systems and languages" (111), she emphasizes that the rise of Iranian linguistic consciousness is linked to religious documents, first with the Avesta of Zarathustra's teachings (111–118). Old Persian cuneiform is the first Indo-European writing system known in Iran (between c. 550 and 520 BC), and the Old Persian inscriptions of Darius clearly reflect the same religious tradition as that of the later written down Avesta (118–122). But Darius' inscriptions were trilingual, in Old Persian, Elamite and Akkadian as opposed to economic documents written in Elamite and diplomatic documents in Aramaic, even Greek (122).

The Old Persian script, writing an old Indo-Iranian language, had similarities to Semitic consonant alphabets, which did not regularly write vowels and to Greek which always wrote vowels (79–106). Unlike the Semitic scripts, which had symbols for consonants and used diacritics on occasion to indicate vowels, the Old Persian cuneiform script of the inscriptions had a full set of consonant (22) signs that implied the vowel [a], signs for vowels and a limited set (11) of syllable signs for consonant plus [i] or [u] and five logograms. Her explanation is that the Old Persian script was linked in both form and purpose with Old Persian religious life (123–125). While the purpose of the Old Persian script was ostensibly political, to record Darius' deeds, it did so with a focus on Ahura Mazda. Syllable signs seem to almost arbitrarily choose some consonant and vowel combinations and not others, while logograms stood for 'Ahura Mazda,' the title of god, the title of king, the earth and the country.

Herrenschmidt interprets the design behind this system as supportive of Darius' belief in Ahura Mazda, although he stated that the script was for political purposes, to record his deeds. The very few logograms, she argues, served as symbols emphasizing "the great concepts of the Achaemenid world" and in order of importance: first the divine beings, Ahura Mazda and the title of god; then the earth and the land, important things created by Ahura Mazda and ruled over by the king; and finally, the king himself, represented by his title (p. 119). For Herrenschmidt, the fact that such concepts were written as indivisible logograms made them recognizable symbols. She goes so far as to say that reading the phonetic script, while rendering the details of language more explicitly than a strictly consonantal alphabet, was not as explicit as the Greek alphabet with separate vowel signs except as it was theologically important. Signs 'da' plus 'i,' for example, might be interpreted [dai] or [di] ([i] instead of the assumed [a] or [i] plus [da] forming a diphthong). But in Zoroastrian theology *daiva (daeva)* would be 'demon' whereas *diva* referred to the divine. The reason for an explicit 'di' was thus crucial as it prevented the utterance of words belonging to "lying Disorder" which exalted *daiva* (120–121). Between the religion of the Sanskrit Vedas and Zoroastrianism in fact lies the crucial semantic shift in the use of the root in Sanskrit *deva* 'god' and its Avestan or Old Persian counterpart *daeva* 'demon.' For Zoroastrians, the 'god' of the Vedas was anathema. When Darius' inscriptions tell how he brutally conquered his enemies in order to stamp out the "Lie," was he also stamping out the false "demons" who opposed Ahura Mazda? The Old Persian script, in allowing some things to be explicit but leaving others ambiguous, Herrenschmidt argues, reinforced "right thought" as opposed to the "Lie" (Old Persian *drauga*).

Between his use of *drauga* 'the Lie' in more clearly political contexts such as the Behistun Inscription, there seems to be room for interpreting it to refer to 'lies' as to who the rightful ruler should be as well as a more abstract evil force that contrasted with the religious good that Ahura Mazda stood for as exemplified in the inscription at the gate of Persepolis (Kent 1953:135–136 = DPd with translation). This inscription is a formal prayer to Ahura Mazda for help against the enemy armies, famine and "the Lie." Its description of Darius' land as 'good' uses a word (*naiba*) that means 'good' in a religious sense, a word cognate with Old Irish *nōib* 'holy.' It would thus not seem far fetched to believe that for Darius his well being and that of his land was part of a religious well being based on belief in Ahura Mazda.

The Persepolis inscription is more clearly religious, although also displayed where both gods and men would see it, while other inscriptions were not. As Herrenschmidt points out, many cuneiform tablets are found buried in temple foundations, while Darius' large Behistun inscription, high above on a cliff, for example, could only be read by the gods because of its inaccessibility (other inscriptions such as that addressing Ahura Mazda as Darius' personal god are more accessible). She thus concludes that when Darius used a special Persian variant of cuneiform to inscribe his deeds, this must have been in the tradition of writing for the gods, not as a means of human communication.

In Chapter 8 she then contrasts the Old Persian experiment in writing with developments in the scripts for writing Hebrew and Greek, which, she argues, left ambiguous or clarified aspects of language intimately related to state values. To the Semitic Phoenician consonantal alphabet, there needed to be added, either diacritics for vowels (the general Semitic solution) or linear letters for vowels (the Greek solution). The Hebrew consonantal alphabet, she suggests, was compatible with the fact that the name of the Hebrew Yahweh was not to be pronounced (132), while the Greek alphabet, in adding vowels, introduced an explicitness in the pronunciation of written language that was not part of either the Persian or Hebrew tradition of writing about religious matters. This is compatible with Herrenschmidt's view that writing systems endure because they encode a theory of language that links visible speech (writing) to the invisible (ritual, cosmology: 126).

■ III.

Jean-Pierre Vernant concludes by pointing to features in the more familiar Greek culture of ancient Athens that may build on the shoulders of earlier cultures but do so in their own unique way. In Chapters 9 "Myths and Reasoning" (149–163) and 10 "The Polis: Shared Power" (164–175), he recalls the old question of the association between Indo-Europeans and the ideology of European supremacy on which early twentieth century expansion was based in order to reject it. Ideas that go back to the nineteenth century view that European culture was the product of an Indo-European-speaking people with origins on the shores of the Baltic is outmoded in the twentieth century with its new discoveries about the Ancient Near East. Such Indo-European ideology must now confront the fact that, as Samuel Noah Kramer said, history began in Sumer, not in Europe. Vernant then raises questions about the roots of some of our most treasured institutions, long traced to Greece and Rome. He concludes that, although there are obvious parallels in myth, for example, between Greek themes and those of the Ancient Near East (e.g., the wars in heaven among the gods), Vernant also points to differences. He recalls the historical break in cultural thinking between the twelfth and eighth centuries BC that was accompanied by a break between the older scribal tradition based on syllabic writing and the new system based on alphabetic writing. He recalls here the use of syllabic Linear B, written on clay tablets at centers from Knossos on Crete to Pylos, Thebes and Mycenae on mainland Greece in the last part of the second millennium BC that disappeared with the re-emergence of Greek literacy in the eighth century BC and the Greek alphabet. Issues of continuity and discontinuity that accompanied changes in script traditions as well as interactions between the Indo-European speaking world and the non-Indo-European speaking origins of writing, beside reasoning based on precedent and hierarchical-based civilization remain to be explored.

Despite the break in script traditions between the birth of writing in Mesopotamia and the Greek alphabet, the roots of western culture must go back to the early Mesopotamian urbanization of c. 3500 BC, millennia before fifth century BC Athens and even the Homeric or Mycenaean Greek Bronze Age of the late second millennium BC.

This is a book by scholars for the general public. As such *Ancestor of the West* deals with essential questions that the nonspecialist will easily follow, but its broad, often daring interpretations, will give specialists something to ponder about things near and dear to them. An Indo-Europeanist may ask, if the western tradition was not born in an Indo-European homeland but is a conflation of Indo-European and non-Indo-European cultures, what is still properly Indo-European?

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The Form of The News: A History

Kevin G. Barnhurst and John Nerone

Reviewed by Marsha Peters

New York: Guilford Press, 2000

Hardcover, 326 pages, Illustrated, one color, $35.

ISBN 1-52730-637-8

Abstract

The evolution of the modern American newspaper is a complex development that took place over a period of two-hundred years through revolution, civil war, prosperity, depression and the age of television.

Its modern form is the result of changes engendered by social, political, economic and cultural forces. Its readership changed from the literate gentleman of the late eighteenth century to the multi-cultural audience today, some of which get their newspapers delivered online.

In their book, *The Form of the News*, authors Kevin G. Barnhurst and John Nerone, both at the time professors at the University of Illinois in Champaign-Urbana, explore the emergence of the newspaper we read today. They adopt a non-traditional approach interrelating newspaper design with cultural shifts. It is not only design, but the implications of the design, that they examine in academic detail. (The book as it appears is intended to be a textbook.)

Visible Language 36.1
Peters, 76–83

They build their case about newspaper form from the earliest newspapers published in America (c. 1750) to the electronic newspaper by studying specific newspapers over a period of time and investigating changes in these news sheets in tangent with the changes in culture. In addition they examine in one chapter the influence of American newspaper design on European newspapers, which was considerable, and in another the internet.

They have divided the development of the American newspaper into several categories—each marked by social, cultural, economic and or political subtexts depending on the historical period. They then proceed to examine these forms for their content, design and voice and how those values intersect with ownership, the means of production, division of labor and targeted readership.

Their primary thesis is that newspapers in the United States are an "instrument of democracy" and examine how they have lived up to that "mission." Populist in their views, they see the newspaper as a place for public discourse.

Form is defined as what makes each newspaper distinct and recognizable. "Form is everything a newspaper does to present the look of the news," they contend. And that includes typography, content, layout, illustration. They proceed to examine factors that affect form—mainly the distribution of power. For example, lack of news about women's accomplishments (except in society) and those of African-Americans during the nineteenth and twentieth centuries is notable. People who have access to power and authority have access to the people in the news business and can influence public discourse. In some eras, this discourse was more open and democratic though even then disenfranchised groups were excluded. Eventually the newspaper itself assumes its own cultural authority to guide readers to what the editors and publishers proclaim as the most important news of the day. Design evolved to reflect this.

The authors begin with the "printerly newspaper" dating from the late colonial era (c. 1750) designed to look like a book (using book-like typography and even columns of type) and meant to be read like a book by the privileged gentlemen readers ensconced in their libraries or pubs—men who were expected to participate in the political process. The printerly paper was craft based—made by hand. There was no reporting of the news as we know it. Content relied on an assemblage of bits of news collected from other print or oral sources in addition to letters, essays, government reports, local news of note and shipping news. And the news was often weeks late. There was no reporting as we know it and no illustrations except perhaps a woodcut in the masthead. The function of this form of the newspaper was to acquaint gentlemen and merchant readers with the latest, though somewhat stale, political and shipping news.

As America moved toward revolution, the form of the newspaper (printerly) remained the same as the content changed to reflect new political ideas and debates. Letters and essays dominated this forum for democracy. However, small but significant changes took place and continued in the post-revolutionary or Federal period. Printers, no longer anonymous, announced their proprietorship on the masthead. The scale of the paper grew larger. Bolder typefaces appeared as well as more decorative flourishes and advertisements. The newspaper grew more authoritative and bold and began to enjoy a prominent role in public life.

Another significant change took place in the 1820s as America moved into an era of fractious politics and multiple political parties. Printers who exerted no editorial control over the paper in terms of defining specific content gave way to editors who brought with them a particular point of view and allegiance to a specific political party. In this sense these early papers resemble many European papers today which have a specific political or ideological agenda. And more important, the papers began to acquire a mass audience riveted by the raucous political issues of the day that concerned the burgeoning democracy. The authors label papers published in this period "Partisan."

As newspapers courted the common man—women were not allowed to vote but had another role as consumers—the papers began experimenting with their look. The bookish printer's paper gave way to a paper with more advertisements and illustrations, notably political cartoons. Changes in printing technology made this possible. Though the editor was the voice of the paper, printers still had a pivotal role, responsible for many of the design innovations, which included the increased prominence of advertisements, ornamentation, charts and tables (protographics) for economic news. Newspapers responding to the needs of the day were flexible enough to experiment and absorb innovations. As newspapers grew in authority both visually and textually—they created a map of what is important for people to know—a chart of the known world.

Advertising and commercial culture influenced newspaper form in distinctive ways. Newspapers began to physically separate ads from editorial material and display ads from classified ones. The eclectic typefaces used in the advertisements, which did not have to follow the form of the news sheets, drew attention to the ads. The use of white space differentiated them from the editorial material. The ads employed headlines, labels and illustrations that all eventually became part of the design of the newspaper itself. With all the competing typography, the newspaper resembled more a circus poster than a book.

The identification of news sources also became important. Most news arrived by mail or hand. When the first long-distance telegraph line was established in 1844, telegraphic news transmitted instantly was prominently displayed on the pages and labeled as such. The front-page news was organized in terms of importance—the beginning of hierarchy—with lesser items occupying space at the bottom of the page and printed in smaller type. Inside, news of interest was segmented into categories along with the ads, a device employed to appeal to different demographics, not unlike today. The modern newspaper was slowly taking shape as the nineteenth century progressed.

The fullest development of this latest stage of newspaper form the authors call the "Victorian paper" (c. 1840s and forward). It was also the age of the publisher whose influence grew as the century progressed. The publisher's main mission was to keep his eye on the markets as well as market his own newspaper. The authors declare that the editor's paper of the Partisan period was "made for the voter, the publisher's made for the consumer."

One of the most modern aspects of the paper—illustration—further enhanced the newspaper form. Advertisements added a pictorial element offering tantalizing images of goods. Newspapers grew larger in scale during the Victorian era, devoting more real estate to ads, not unlike today's papers.

The first illustrations, outside of political cartoons, to appear in newspapers were wood engravings, woodcut reproductions of artist's sketches. The early illustrations added nothing new to the news report. Rather they enhanced the narrative in a descriptive, decorative way. The artist gave a visual interpretation of events based on the text. This was not reportage. Though photography arrived on the scene in 1839, there was no efficient means of reproducing photographs in the paper. The best substitute was sketches made after photographs, notably during America's Civil War. Most illustrations dealt with nature, not surprising since the nineteenth century had a passionate regard for nature as a medium of social change. The built environment was depicted, as new cities sprung up along railroad lines and clustered around lakes as America pushed westward.

Though based on a reality, the sketches were not real in the photographic sense. Artists interpreted the world for readers. Armchair travel was a popular nineteenth century diversion. From the comfort of a cluttered, overwrought Victorian parlor, one could view stereoscopic photographs of far away places. Newspaper illustrations in their own way continued this comfortable view of the world.

Photography later ripped away this gauzy, romantic view. A sense of objectivity intruded. But that was a later development. The role of photographs as prominent elements in newspaper form did not take shape until the rise of modernism. Newspapers, since the end of the nineteenth century, had the capacity to print photographs, but they were not regarded as news. Illustrations still dominated particularly in papers with a conservative design philosophy. When photos were displayed they were often portraits decorated with hand-drawn borders and flourishes, a leftover of Victorian sentimentality. Even through the 1920s newspapers still carried sketches on the front pages, political cartoons, illustrated logos. By the 1930s all that changed, particularly with the appearance of the hand-held 35mm camera and wire services such as the Associated Press which had the capacity to transmit photos over phone lines. The immediacy of photojournalism was impactful. There is no single decisive moment when photographs began to dominate design. It was gradual and now is a way of seeing the world.

By the beginning of the late nineteenth century newspapers entered what the authors called the "Classical" period of modern design during which newspaper design looked back to a period of clean, simplified design. The printerly newspaper was the paradigm. These were not newspapers of brash photo display, but dignified gray ladies dominated by type which made them appear authoritative with a capital A. Classicism coincided with a quest to make sense of an increasingly urbanized and industrialized world at century's end. A quiet, classical look for newspapers gave people confidence. Order and clarity ruled. The social map was maintained.

These classically inspired newspapers also included in their design the virtues of early modernist design such as more geometrical, horizontal layout and hierarchy. And technological developments allowed more freedom to modify form. Headlines stretched across more than one column, stories got larger and were displayed in a hierarchical manner. White space alleviated the gray mass of body type. Photographs though often played small were an organizing element on the page around which a story was displayed. This was not the case in all newspapers, but it was the most adhered to form.

The authors note that the classical phase lasted until the 1970s when newspaper design exploded and modernist design took on a new look. Graphic designers, not journalists, influenced the papers of the '70s. Though keeping to the basic modernist tenets they expanded on them. Newspapers declared themselves through design. And the impulse to promote their contents was very visible as summary boxes of inside content were blasted across the tops of front pages, "Read me, Read me" like some new potion for Alice in Wonderland. Emphasis was put on a dominant visual element, usually a photograph standing alone or packaged with a story.

Part of the impetus to change was the increasing competition from television and its relevance to news. Live reports from Vietnam and Cambodia gave television news a lot more legitimacy and power. The flickering images on the screen could never be stilled, but the newspapers tried. They could not have the immediacy of television and they feared loss of readers to the other media; they began experimenting with making the front page more lively.

In 1982, the appearance of USA Today caused another jolt in the design continuum. The authors contend that the newspaper with its energetic design—emphasis on informational graphics, higher story count, less space for photographs as dominant elements and varying typography—owes much to the Victorian newspaper. No design is ever outmoded, no idea is ever new. As with fashion, freshness was based on innovation but with a backward look to past successes.

Form is both visible and invisible. You hold it in your hand but what it contains is also a result of intangible currents. The trajectory of newspaper design was not linear the authors conclude after their exhaustive study. The form of newspapers came about through experiment and in response to outside forces. Newspapers constantly reinvented themselves to stay relevant and in touch with the dominant cultural/social/political trends of the time. Technology, they add, was not an impetus to the changes in newspaper form, but a facilitator. By the time computers became complex enough to output design ideas, a curious relationship developed. They enabled newspapers to experiment and possessing the technology and knowledge to use it gave designers a role in the look of the newspaper. They are keepers of the magic.

A case close to home illustrates some of the author's points. In March 2001, the *Chicago Tribune*, for whom I work as a photo editor, introduced a comprehensive redesign in response to the skyrocketing cost of newsprint. Many other major dailies such as the *Washington Post, Los Angeles Times, Hartford Courant* had done the same, namely to reduce the size of the news sheet. This shrinkage necessitated rethinking the traditional design. The paper had undergone changes before but this one was from the front page to the back page. The evolution of this redesign involved a fleet of editors and designers, who were ultimately the individuals making many of the visual choices that altered the newspaper's form.

The paper modified but kept its blue masthead and waving flag, but refined the typeface. The masthead is a newspaper's distinctive display of its brand name. The body typeface was kept though it was made a little blacker with more leading so it was readable in the smaller column width. New fonts were selected for headlines—bolder in the news sections and lighter in features. The look of informational graphics changed. Photos would be run larger. The thrust of the redesign undertook to make the paper more readable and distinctive. "Typography," the editor, Ann Marie Lipinski, wrote in an note introducing the design, "is the voice the *Chicago Tribune* uses to speak to its readers. . . Headlines can be bold, while the text speaks with midwestern clarity and directness." This encapsulates a philosophy of newspapers born in the nineteenth century (the Tribune was founded in 1847) down to the present.

So newspapers continuously reinvent themselves propelled by forces both internal and external. Content changes with the news and it changes fast. New stories, new headlines, new photographs alter the newspapers' form on a daily basis.

At the end of their chronicle, the authors lament the loss of a print forum for public discourse, maintaining that newspapers filled with features and intent on self-involved purposes were no longer open to ordinary civic discussion. There was a disconnection between the community and the newspaper.

The cataclysmic events of September 11, 2001 brought about powerful changes in newspapers—their form expanded to encompass the unforgivable and horrific and the public's response. One wonders what the authors of this book published in 2000, would make of that.

Marsha Peters is a photo editor at the *Chicago Tribune*. With degrees in political science and American history and work at two major American dailies (the *Providence Journal*), she brings a strong perspective to this review.

Zero: Hans Schleger—a Life of Design
Pat Schleger

Reviewed by Colin Banks

New York: Princeton Architectural Press, 2000
248 x 210mm, illustrated, hardbound, 272 pages, $45.
ISBN 1-56898-273-9

Abstract

When one has mastered the craft of typography the next trick is to move on up to the art of typography. Not many people can do that: Tschichold was one, Dick Elffers another; they could make marks on paper that rang clear and true, like the bells of a cathedral. Of recent times Tom Eckersley and Saul Bass produced print that achieved art with only a passing nod to typography; Hans Schleger's designs come somewhere in between.

Schleger's approach to design was forged in Germany where, initially, he seemed to have been attracted to the complexity of the subconscious, manifest in a Max Ernst-like surrealism. This was rapidly overcome by a reductionists' search for underlying form, a style that remained with him for the rest of his career; maybe this had something to do with his adopted name 'Zero.'

Visible Language 36.1
Banks, 84–88

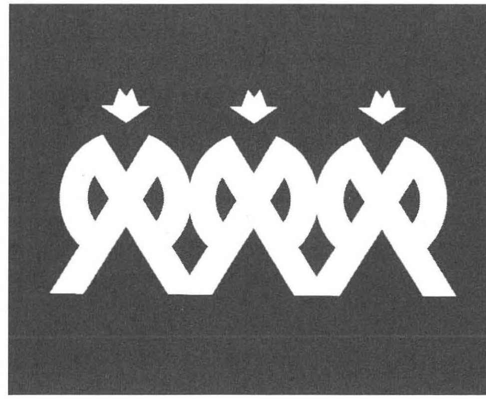


Figure 1: Weber and Heilbroner Trademarks, c.1925

An economic migrant, he arrived in New York in 1924 and shortly after opened his own studio at 270 Madison Avenue; he offered a design service, advertising home-luxuries for the most part. He introduced the three-men symbol that came to represent Weber and Heilbroner, the mens' clothes stores (*see figure 1*). W&H advertising we are told, was driven by the then new idea that it is not necessary to put the product before the imaginative representation of the brand and its qualities, and it was imagination that Schleger had in abundance. The W&H advertising manager had gone to 270 Madison saying can you draw me an elephant for five dollars? To be told "I cannot draw anything for five dollars."

At this time Schleger wrote a lyrical description of approaching downtown Manhattan on the ferry and of the people going there to work, he stresses the upbeat nature of the beast where talent is encouraged and it is a reminder that 'the business of America is Business' a lesson he learned.

The Wall Street Crash brought him back to Berlin in 1929 and by that time his talent was acknowledged on both sides of the Atlantic, but he had one more citadel to conquer. A spell in the Berlin Office of the London Agency Crawfords, brought him into friendship with Ashley Havinden and later with Edward McKnight Kauffer, commercial artists as they were then called, both of whom were well established in London when Schleger moved there in 1932; on a path well beaten by Eric Mendelssohn and Walter Gropius, the Hungarians Moholy-Nagy and Marcel Breuer, and the Pole George Him. Zero's friends McKnight Kauffer and Marion Dorn, the textile designer, crossed the pond the other way, to London from the States.

Schleger owed a lot to Edward McKnight Kauffer, Kauffer worked at Crawford's in London from 1927 to 1929. When Schleger came on to London Kauffer generously introduced him to several of his clients. The familiar names of 'encouragers with patronage' appear: Jack Beddington at Shell, Frank Pick and Christian Barman at London Transport, Sir Stephen Talents at the Post Office and Lund Humphries the progressive printers who exhibited his work and later employed Jan Tschihold. But with the 1939 war, posters by Zero became the wallpaper of Metropolitan life here in London (*see figure 2*). Kauffer in my view also strongly influenced his style at that time, the famous flying birds poster seems to lend some of its dynamism to Schleger's Stop for Shell poster and there are other very different comparisons to be drawn. I think I can see something of Hans Erni also, a Prince of Draftsmen, and then the surrealism of Max Ernst.

One of my first jobs was working for multi-task design group led by Gabi Schreiber, who was like Schleger a Berliner; it was not an enriching experience. I had to revise their letterhead and was told "keep it as close as possible to Zero's original specification." I could not see what the fuss was about, it was clumsily set in Bodoni 135 and compromised between asymmetric and down the center arrangements. I dug back in the files and it was like unwrapping a pearl. What Schleger had originally given them was delicately balanced, like an Alexander Calder mobile; it was set in Walbaum Light and every word sang like music.

I never met him but stories about his pernickety engrossment in detail were rife, On rejection of his morning coffee: "Now this is how I like it; mix the milk and the coffee grains first and pour the water, whilst still boiling, from eighteen inches above the cup." Eminent designers both from Europe and the States were said to invariably to call by on 'Poppa Schleger' when in London. including Paul Rand who wrote the introduction to this book, Saul Bass and Lucian Bernhard.

Many of the designer's thoughts here are skillfully wrought into his words:

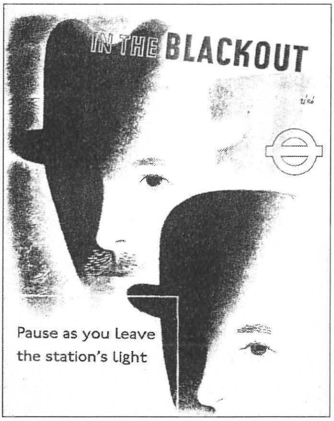


Figure 2: London Transport Wartime poster 1943. Edward Johnston's 'Underground block-letter' was used for most of LT's display lettering from the first world war until the 1970s.

Design can be disarming through simplicity. It does more than catch the eye. It can give shape to thought and feeling as the glass does to wine; Limitation produces form; Such people ask the designer to make chickens look like peacocks; Few advertisers are taking expert advice This is interesting considering how differently they behave when their health, property or liberty are at stake; Advertising should not be designed by us for them; and Advertising as a long term investment.

With advertising Schleger both made his reputation and promoted his own name (*see figure 3*), first in New York in the 1920s. He retained an involvement with it throughout his career, it was a major part of his trade, he was a design consultant to the important London agency from 1952 to 1964 and is shown in this book to be strong when writing on justification and its benefits He was visually telling in the campaigns he directed for Mac Fisheries, Fisons and ICI, national and international corporations. He understood that words and images should come together hand in hand and often that meant playing in a team.

Advertising still had to justify itself to many powerful critics throughout his times. When I started out in design in the 1950's self advertising by designers was expressly forbidden by our representative association in Britain. The memory was still fresh of how the martyrs of earlier years had struggled to be recognized as professionals, who did not undercut fees or steal clients and no British profession allowed self-advertising in those times.

There are perceptive introductory essays by both Fiona McCarthy and David Bernstein. Bernstein emphasizes a precept Schleger returned to again and again: "Even in his earlier days, when a struggle to establish himself might have tempted him to create one-off ads, he was determined to lay foundations rather than to erect facades." And there is a message here for the computer technilogs: "He hated glibness, technique masquerading as creativity and smart execution blinding the onlooker to the absence of an idea. He also believed in 'negating self-expression'." Bernstein goes on to say "Schleger was not the usual stereotype of the instinctive, untidy, irrational quasi-genius. He was an artist-designer, his own term for someone responsible for design policy, whose toughest task was to 'sublimate himself' and 'channel all his powers into solving a problem.' He was the thinking man's creative—because for him deep thought preceded action."

His widow, Pat Schleger, puts it this way "the visual image played a secondary role to the planning, content and psychology of the approach."

One of the essayists is at least fifty years adrift when she writes, "he and F.H.K. Henrion one might almost say are pioneers, of the coordinated visual image running through the whole range of a company's activities." There had been many earlier pioneers, for instance the design 1907/1914 coordinated policy of Peter Behrens in Germany at AEG and including in Schleger's day the really concrete achievements of Bradbury Thompson in 1938 at Virginia Pulp and Paper and earlier in 1934 at the Container Corporation of America (CCA). This last is interesting in this context because Schleger spent 1950 as guest professor at the Chicago Institute of Design, while there he designed some match folders for CCA. Not much but it seems possible that could have exposed him to the merits of a rigorous corporate identity scheme; Container Corporation had one of the best, introduced by Egbert Jacobson in 1936. This last was completely redone in 1956 by Ralph Eckerstrom.

Interesting also because he was invited to the Chicago Institute of Design by Serge Chermeyeff, another émigré who had spent a long time in transit in London. With the shadow of its founder Moholy-Nagy behind them and with Mies van der Rohe, Konrad Wachsmann and Hugo Weber also on the payrole, it must have felt like the reincarnation of European modernism had taken root there.

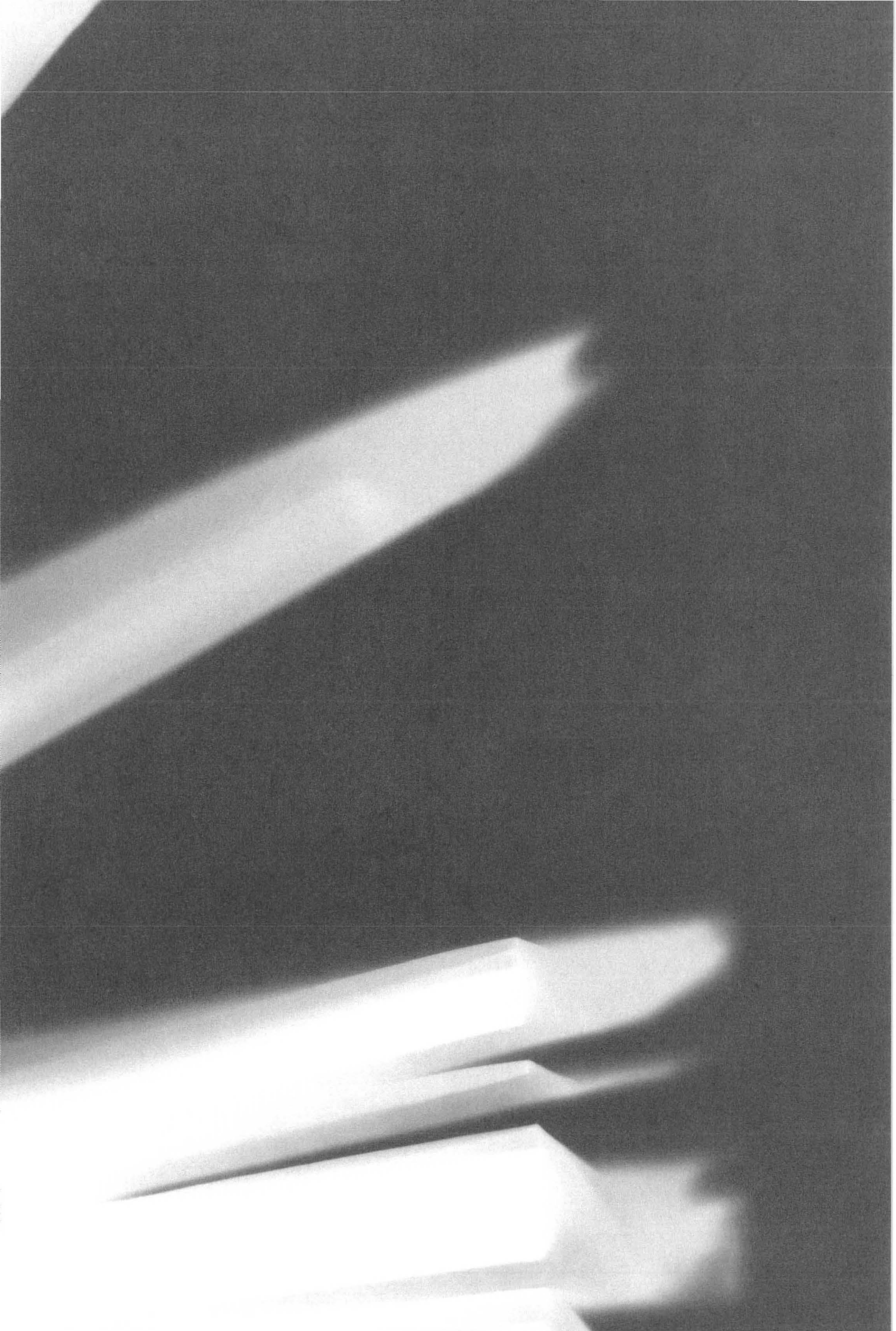
Figure 3; Schleger originally drew this for Park & Tilford in 1925; he then used it again to advertise himself and Strathmore Papers.

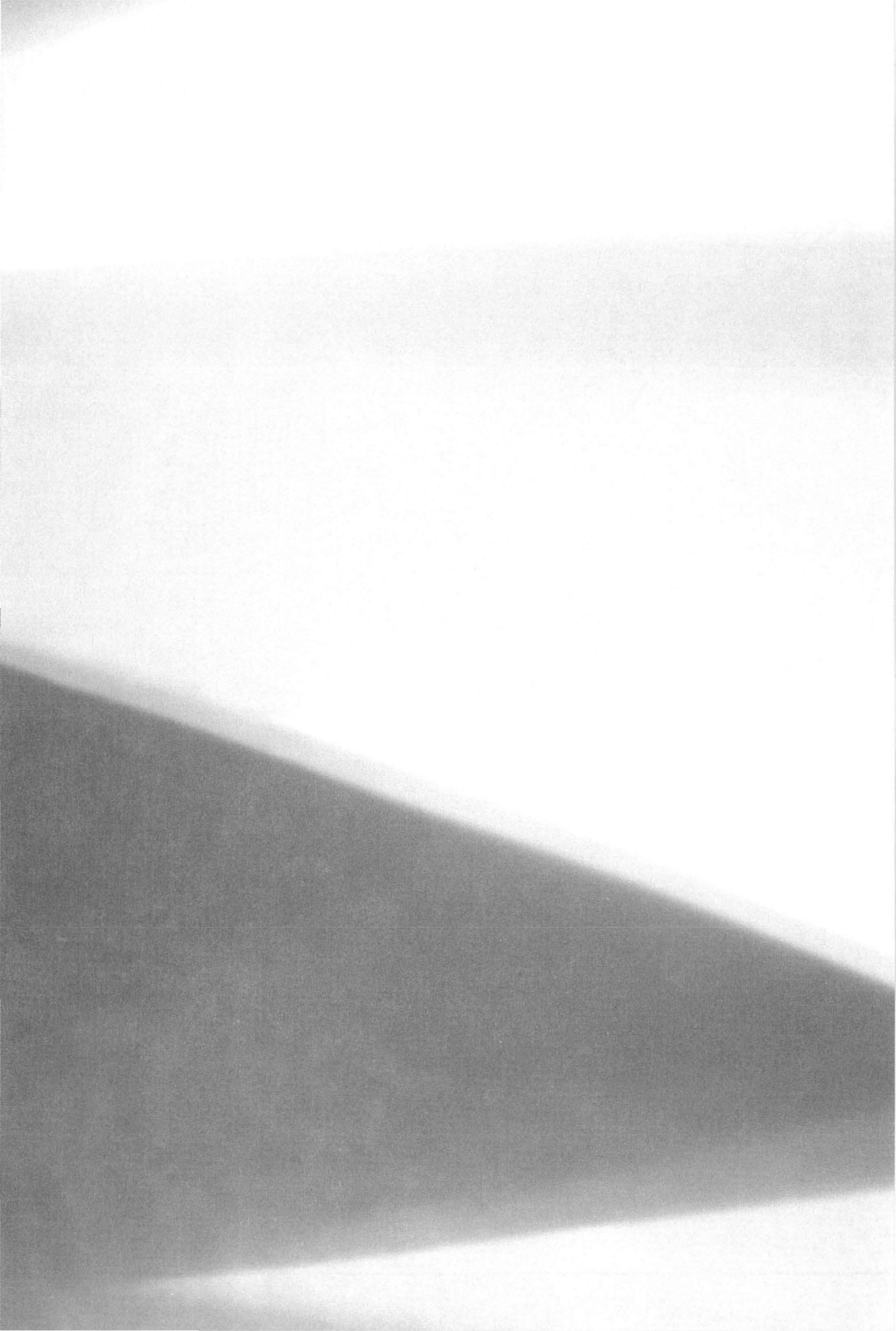
The words of the late Lord Reilly (Director of the UK Design Council) sum him up: Reilly called him "The master of the simple statement." Another commentator said, "he seems to have a quite extraordinary capacity for letting problems evolve their own solutions." Half true, but Reilly would have none of it, "Solutions do not evolve on their own. They are arrived at only after a proper process of analysis and synthesis. The fact that these labors are not visible in the final result is the measure of Schleger's mastery of his job and of himself."

Hans Schleger born in Prussia 1898, died England 1978.

The book is skillfully designed and detailed, well produced, and good value.

Colin Banks is a life-time typophile and long-time member of *Visible Language's* advisory board. As book review editor for the journal he critiques new titles.





Call for Papers
Visual Literacy and the Dimensions of Consciousness

This special issue is focusing on major themes of consciousness as they relate to the development of Visual Literacy competencies. It hopes to probe the grounds of observation and the forming of perceptions, but also the critical changes that occur during processes of contemplation and analysis of something new and not previously experienced that lead to the understanding of new images and objects or new dynamic image/object environments. It is interested in investigating the intelligibility levels of concepts or metaphors embedded in images and objects, hoping to gain insight into the mediation process between conceptual and contextual conflicts and inquire into the valuation process that declares one metaphor better or more appropriate or believable than an other.

It is inviting research from cognitive science, neuroscience, philosophy and all other relevant disciplines of the sciences, arts and humanities directed toward understanding the nature, function and underlying mechanisms of states of awareness as they relate to Visual Literacy.

■ Rationale

In the traditional approach to Visual Literacy, especially in the Fine and Applied Arts, the audience—the public that functions competently when left to its own devices and responds without hesitation to any visual stimuli—has been reduced to a tertiary bystander role. In fact most texts on Visual Literacy deal only with the principles from the vantage point of the maker, but not much with the more difficult tasks of intelligibility, decoding, deciphering or reading of icons, images or objects of art or design by a public that is less than well prepared by its general schooling to deal with the emerging complexities of hyper information environments like multimedia performances and exhibitions, multiscreen and multiframe films or videos or the philosophical shifts within the art worlds.

Assuming that graduates from art and design schools leave their institutions with the competence of being fully visually literate they comprise an extremely small group. It is nearly insignificant in relationship to the total citizenry. A rough estimate suggests that in the United States with a population of 250 million, the 'major art institutions' annually graduate approximately 22,000 to 25,000 competent object and image makers (a ratio to the population of 0.00009% or 0.0001%) and approximately 45,000 to 50,000 graduates with a grounding or a degree in art history (a ratio of 0.00018% or 0.0002%). Even if one combines the two groups and measures them in relationship of one generation (25 years) this number stays extremely small (0.007%).

The credit for the act of creativity still goes to object and image makers, the ingenuity and creativity of the public in making sense of what is encountered has been pretty much ignored or neglected. Therefore the question arises, if only a fraction of the public is formally trained to deal with principles that guide the understanding of new or unfamiliar contents and the establishment of criteria for value determination of certain media experiences, how is the public's consciousness aroused or activated and to what extent to instinctively adjust to major changes in the communication environment—new media, new contexts, new metaphors? It is clear that it takes intelligence, imagination and daring to begin to interpret something on one's own terms, encountering difficulties that are equal to confronting the task of negotiating an unfamiliar language without previous experience, guidance or analogies. How does a novice viewer deal with something that does not look familiar or for which there is no cultural reference?

It is known that in the cyclical process of language evolution, in making sense of what is not known and not previously experienced, the borders of a language are extended, even if sometimes through misinterpretation—embroidered, distorted and amended. In all revolutions of thought energy is spent in trying to corral the newness and to neatly collate the new items with the old. Victor Shklovsky points to 'familiarization' as a stabilizing force for habituation, in which perceptions become inflexible and automatic. At the same time he points to the stimulus of 'defamiliarization' as bringing new attention to something already experienced, known and removed from consciousness that is awakened only by unfamiliar media, new and compelling metaphors or decontextualized functions. If this is true, then 'defamiliarization' creates worlds of instant stimulus, setting into motion the human memory and sensing system to deal with an intruding or interloping philosophy, object or image. Defamiliarization allows all matters of interpretation as well as misinterpretation, therefore it is giving the creativity of an audience the widest range. Individuals, without external guidance, must decide on the nature of the concept, its symbolic or cultural value, on their own.

■ Guidelines

Submission of an article is taken to imply that it has not previously been published and is not being considered for publication elsewhere.

Visible Language is interdisciplinary—it publishes scientific research and poetry—historical research and design process - language analyses and pedagogical demonstrations and more. In this special issue it seeks to provide some exemplary research as it relates to the communication and the visible language challenges in the forefront of our attention.

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Abstracts are limited to 500 words and should include: the analytic strategy (quantitative, qualitative or comparative) and should be submitted via email to the editor poggenpohl@id.iit.edu by July 1, 2002. At the same time a brief biography of the author(s) not exceeding 100 words should be included.

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■ Final paper submission

Final papers are due by December 1, 2002 in the required format as stipulated (see Visible Language: Notes on the Preparation of Manuscripts: http://www.id.iit.edu/visiblelanguage/VLPublicationServices/Manuscript-Notes.html)

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