

GRAPHIC DESIGN IN THE URBAN TRANSPORTATION ENVIRONMENT

Graphic Design in the Urban Transportation Environment

A thesis submitted to the Faculty of the College of Imaging Arts and Sciences
in candidacy for the degree of Master of Fine Arts.

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March 2001

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Acknowledgments

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Project Definition

This thesis focuses on various design problems facing graphic designers who design visual messages for urban transportation environments, specifically bus and subway systems. The urban transit environment poses a unique challenge for designers because it is multidimensional, and the audience is in constant motion. As David Bernstein describes the transit environment: "It's up, down, all around, in the sky, underground..." (Bernstein, 1997, p. 9).

Added to this unique challenge of capturing the audience's fleeting attention span, designers also face problems of space limitations, poor lighting, chaotic placement of posters, and lack of a cohesive visual plan for a transit venue.

Urban transit environments offer myriad kinds of information to its audience of pedestrians and mass transit riders. These include:

- informational (e.g., transit maps),
- instructional (e.g., signs telling passengers where and where not to stand),
- wayfinding (e.g., directions to the street, trains, taxis),
- regulatory (e.g., "no smoking" signs), and
- promotional advertising (e.g., commercial posters and billboards).

This study focuses on promotional advertising issues in both indoor and outdoor transportation venues, the author does so for several reasons: these kinds of messages dominate the transportation environment, and are of particular interest to the author as a designer. Advertisements — from colorful posters on subway walls and bus stops, to back-lit commercials, to large billboards and murals covering buses — dominate the urban transit landscape and seem to be placed in no particular order and have no master plan. However, despite the chaos of promotional advertising, and possibly due in part to the chaos, it creates a sense of vibrancy and color in the urban landscape.

Research Goals

The overriding goal of this research is to shed light on the problems facing graphic designers working in this venue and to offer some solutions, including a set of guidelines presented in the Conclusion. To the best of this writer's knowledge, few books and articles, either academic or commercial, examine the graphic elements and constraints of urban transportation systems, and none do so from the audience's perspective. This project seeks to capture the audience's perspective of the urban transit environment: walking to, waiting for, and riding on buses and subway trains. The author captured this perspective by videotaping images while traveling through the subway and bus systems of Toronto and New York City.

Project Definition

Primary Problems and Opportunities

The urban transit realm presents inherent problems and opportunities for graphic designers. The primary problem is that the passengers are in constant motion and their attention span is limited.

The primary opportunity is that the audience is captive: passengers are either waiting for, or riding on, a bus or train and often have spare time to look around and take in their environment, including visual messages.

The Problems

Constant Movement: Urban transit passengers are constantly in motion. They are either moving, or expecting to move, to arrive or depart - at any given moment. Thus their attention spans are short, and are often influenced by the time it takes for a bus or train to arrive, sometimes 20 seconds or sometimes 20 minutes. This short yet captured attention is a critical element for the transit graphic designers because they must get the message across quickly. This sharply contrasts with creating visual messages for a magazine or a newspaper audience who read at a casual pace while sitting at a kitchen table, office desk or coffee shop. Adding to the problem is that the transit audience, sometimes moving and sometimes stationary.

Bernstein captures this dynamic well: "Encounters may be distant and fleeting (though sponsors hope the message is neither). They are either always moving — you pass it, it passes you, the two of you move together. Sometimes you are both stationary — in a close encounter..." (Bernstein, 1997, p. 9).

Visual Clutter (Noise): Due to the chaotic nature of the transit advertising venue, where myriad visual messages are arranged in no particular order, passengers are bombarded with disjointed information from many directions. The numerous bits of information — from billboards, murals, posters, wayfinding signs, maps, and graffiti — combine to create "visual noise". This can overwhelm passengers. Like "white noise", passengers tend to "tune out" the messages.

Advertising "Unfriendly" Architecture: The architectural layout in most subway and bus stations is not conducive for commercial advertisements because most stations and stops were not designed for this purpose. Many subway stations in New York and other urban centers were built in the early 20th century and were designed with no consideration for advertising. This contrasts to other advertising venues such as outdoor billboards or magazines, where the space is clearly laid out for advertising and where ads are placed carefully to meet the audience's perspective.

Over-sized Promotional Advertising: Many subway and bus station walls offer large spaces that accommodate posters and ads that are too large for the passersby to see in their entirety. For example, ads designed for outdoor billboards are placed in subway and bus stations.

Too Much Text: While often too big for close viewing, many posters and billboards are also filled with far too much text for the transient audience to comprehend.

Poor Perspectives: Subway and bus station/bus stop walls also provide poor perspectives for the viewing audience. The end result is that the intended audience does not receive the message.

Chaos Reigns: Urban transit advertisements seem to have a “guerrilla warfare” quality: ads, posters, and signage, appear to be thrown up on walls in hopes that passengers might notice them and heed their message. The elements do not blend with the background or with each other. Different colors, shapes, styles, and messages shout out at the audience, creating “visual noise”. This lack of cohesiveness, harmony, and balance results in visual chaos. In essence, the wayfinding signs and maps, which should benefit the passengers, and the commercial ads and billboards, which should benefit the sponsors, and ostensibly the public, are often largely ineffective.

Lack of Planning: The problems above are not addressed, it appears, by designers, and those in charge of transit advertising, transit administrators, as is demonstrated by the largely ineffective ads in transit environments. Times Square in New York City and Yonge Street in Toronto demonstrate this well: the myriad ads in various media — flashing lights, words flashing across electronic billboards, moving images and sometimes smoke billowing from billboards — all create a lively but chaotic scene, with little semantic, syntactic or pragmatic effectiveness (see p.7). The messages are blurred, promotional advertisements compete for attention, and few messages seem to reach the moving audience.

Indeed, graphic designers face a complex environment. “No other advertising medium is such a complex of paradoxes. Outdoor is old yet new, it is the oldest medium yet the most dynamic. It is primitive and sophisticated...” (Bernstein, 1997, p. 114).

Project Definition

Semiotic Model

Solutions

The primary question that this thesis addresses is: How can designers overcome the inherent barriers of the urban transportation environment and design effective visual messages? How can they work with the chaos to communicate messages clearly and effectively. Since graphic designers cannot control much of the chaos, this thesis presents various approaches for working with the chaos, and suggestions for urban transit administrators for reducing the chaos.

Interacting Visual Elements

This study seeks to identify problems and solutions by examining how the elements of public transit environments and promotional advertising interact, how they interfere with each other and how they can be manipulated effectively by designers. It will examine the design issues and problems in transit advertising using the **semiotic model**, which looks at issues from the semantic, syntactic, and pragmatic dimensions, described below.

The semantic dimension, examines whether the message is clear. Do the text and graphics fulfill their message-making potential? Does the visual design communicate the intended meaning? How well does the graphic design represent the message? Can people from various cultures, ages, ethnic and class backgrounds understand the message?

The syntactic dimension examines the effectiveness of the formal properties of the visual message such as the aesthetics, and the harmony of the visual elements such as typography, color, and visual organization. Do the elements work in harmony? Do they balance and support each other? Does the design successfully integrate figure/ground, format, color, etc.?

The pragmatic dimension examines the effectiveness of the functional aspects of a design solution, particularly the physical placement, the lighting, and other factors that render the design visible to the audience. This is the relationship of the visual design to the user. Can a passenger see the design clearly? Is the design compromised by poor lighting? Does the design remain visible throughout the range of expected viewing distances? Is it visible during the day and at night? Is the design vulnerable to vandalism? Is the size of the design solution appropriate for the space it occupies?

In essence, this study will ask, *what* is being communicated, and *how effectively* is it being communicated?

Project Definition

Solution Plans

Venues Examined

Toronto and New York City were selected due to their similarities and differences, including their large, multicultural populations and their extensive transit systems, discussed further in the Research section (see p. 13). Another goal of this study is to explore and expand upon a relatively uncharted area, urban transit advertising.

The author consulted various books, journals and organizations to gain insights and models for this case study on urban transit message making. An Internet search was conducted, along with a search of the RIT Wallace Library's electronic catalog to locate publications and organizations focused on transit design issues, guidelines, and studies. A search of Nexus-Lexis, an electronic library of journal and newspaper articles, was also conducted. These inquiries rendered much information on the technical aspects of public transportation message making, along with related revenue issues, and a handful of titles on transit-centered graphic design issues.

Precedent A

Of the many sources examined for this investigation, David Bernstein's seminal book, *Advertising Outdoors: Watch This Space!* (1997), serves as the primary model for this project because it centers on effective outdoor visual communication. Beginning with the history of outdoor advertising, Bernstein explores the relationship between art, outdoor message making, advertising and the audience. Through vivid imagery, he demonstrates how to combine potent images and words to deliver commercial messages and brands to consumers.

Bernstein details the advantages and the constraints of outdoor message making. One of the primary benefits of outdoor advertising is its broad audience reach: "where they live, work, play; where they drive and shop, where they commute and congregate" (p. 114).

Its main advantage is its grand scale: "Outdoors, it is legitimate to speak loudly, to make the big gestures, to use rhetoric of the street corner meeting inappropriate to the drawing room" (Bernstein, p. 114). In discussing the three primary outdoor media — giant murals, billboards and posters — Bernstein examines factors that make these venues successful. Of all the lessons offered by Bernstein, simplicity is the key message. But he cautions, "simple does not mean simplistic, let alone simple-minded... Attracting attention is important but [audience] involvement is critical, and if possible, beginning a dialog, a relationship" (Bernstein, p. 72).

While this book focuses on outdoor advertising and not on bus and subway message making, *Advertising Outdoors* relates directly to the author's research because it focuses on how passengers "see" and comprehend outdoor promotional advertising — roadside billboards and posters — while in motion. He examines graphic design context and presents principles for creating in the outdoor medium.

Precedent B

Another significant source for this study is *Billboard Art on the Road* (Steward Heon et al., 1999), a catalogue for a permanent exhibition of contemporary public-art billboards at the MOCA museum in North Adams, Massachusetts. The billboards, designed by designers, are effective not only visually due to their clever design, but also semantically in that their social messages are communicated through simple yet provocative words and images. The billboard artists featured in this exhibition, similar to the graphic designers working within the urban transit setting, are cognizant of their fleeting contact with the audience "In the time frame of a passing glance, they must create a visual stop, leaving the viewer with a thought to ponder rather than an image to buy..." (Steward Heon et al., 1999, p. 22).

The concept of the captured but fleeting audience came into sharp focus after visiting this show and assisted the author in defining the thesis problem and formulating potential solutions.

As Steward Heon et al. states:

"Be it commuters waiting for mass transit or at the stoplight or spectators sitting at a ballpark, stationary viewers are, for a brief time, a captured audience. With a billboard on a moving bus ... it is the image rather than the viewer that moves, recreating at an accelerated rate the original experience of advertising boards carried around on foot." (p. 24)

Precedent C

To assist in this research, the author joined the Society of Environmental Graphic Design (SEGD) and The American Institute of Graphic Arts (AIGA). Inquiries were sent to both organizations' administrators and online discussion groups to gather research and publications on graphic design issues related to outdoor and transit advertising (see The Appendix). The replies included names of publications, speeches, and research organizations such as the Transportation Research Board in Washington, D.C., and the Federal Transit Administration, and KRW, Inc. (see Bibliography). SEG D sent the author several speeches including one by Paul Arthur:

- *Who Will Help Me Find My Way? An Exploration of Wayfinding*, (SEGD, Aug. 6-8, 1987), which focuses on cues that people use to find their way in buildings and other large settings: architectural elements, wayfinding signs and maps, and verbal queries (such as asking passersby and security guards for directions).

Another helpful source provided by SEG D was a study:

- *Interior Signage: Legibility for People Over Age 65*, which focuses on typefaces and type sizes that offer the greatest legibility for elderly people. This resource helped the author assess the need for larger type sizes in transit message making to address pragmatic issues such as readability for passengers of all ages.

Precedent D

The National Transportation Research Board provided the author with several relevant studies that it sponsored, including:

- *Guidelines for Transit Facility Signing and Graphics (1997)*, which provides universal wayfinding graphic symbols for the array of information at transit stations, from emergency services and telephones to toilets, parking, and wheelchair ramps. The guidelines included not only signage and symbols, but details such as the shapes, colors, size, fonts, and color coding that serve a universal audience, including the hearing impaired. This source helped the author further understand how symbols are used to convey meaning.
- *Transit Advertising Revenue: Traditional and New Sources and Structures (1998)* These guidelines center on advertising revenue-raising methods for urban transit organizations. This study helped the author understand how the revenue-making function of transit authorities affects the use (and crowding) of transit advertising spaces. The author realized how transit administrators, focused primarily on raising revenues, are forced to think in terms of volume (placing as many posters in one spot) to generate the greatest revenues. This factor clearly affects design issues.

Precedent E

Another excellent book that guided the author in this study is *Community Design Management* by Jack Williamson (1995). This book, written as a resource guide for communities seeking to revitalize and manage their natural environments and commercial districts, presents a five-step design problem-solving process, which the author considered in formulating this study:

1. Recognition of the Problem to Be Solved
2. Data Gathering
3. Analysis of Data
4. Generation of Alternative Solutions
5. Selection of Best Solutions

Based on this concept, the author identified the problems, gathered data via videotaping, analyzed the data, formulated solutions, selected strongest solutions, and attempted to evaluate the solutions. This process, while basic to every designer, provided a format for this study.

Precedent F

Yet another useful guide, *Design Literacy, Understanding Graphic Design* by Steven Heller and Karen Pomeroy (1997), discusses how graphic design is not as ephemeral as many designers believe. Certain advertisements, posters, logos, books and magazines endure as signposts of artistic, commercial, and technological eras. This book also explores a variety of individual objects and focuses on their significance from an historic perspective. This book helped the author realize the importance of effective graphic design in message-making.

All of these sources, combined with the field research and ensuing analysis, informed and guided the author throughout the study.

Research

The Passenger's Eye

This Research section describes the research carried out in the Toronto and New York City transit systems in 1996 and 1997. The goal was to capture and record the passengers' perspective of transit advertising within the urban transit environment and to assess what was effective and ineffective based on the semiotic model as discussed in Chapter 1, Project Definition. The ultimate aim was to analyze this perspective and the interacting design issues, and to improve approaches to designing for this environment.

As noted earlier, Toronto and New York City were chosen for this study not only due to their similarities and differences, but because both cities are large international urban centers with major subway and bus systems. New York City, with a population of approximately 8 million, has 722 miles of subways and 1,871 miles of bus routes. New York's subway system was built in 1904 and Toronto's was built a half century later in 1954. Toronto, with a population of 4 million, has 35 miles of subway lines, and over 500 miles of bus routes. Furthermore, both cities have the largest population in the U.S. and Canada, and both have large and diverse immigrant populations.

The Purpose of the Field Trips

To carry out this study, the researcher took field trips to Toronto and New York City to videotape what typical passengers see when riding on, walking to and from, and waiting for subways and buses. The researcher aimed to capture and isolate visual message making examples and analyze them to gain a better understanding of the design problem solving for the urban transit environment.

The Digital Eye

The goal was to view the surroundings, the interior and exterior scenes, via a passenger's eyes. The passenger's view is most important for this study because what passengers see and comprehend is the ultimate test of effectiveness. If passengers can see, register, and comprehend wayfinding signs and commercial advertisements clearly, then it is likely these design solutions are effective.

On these field trips, the researcher videotaped the general and the specific: street scenes above ground and underground, commercial advertisements and other visual messages in the street and in subway stops and bus stations. The camcorder, like a pair of passenger's eyes, scanned the billboards and advertisements on buses, posters inside buses and trains and visual messages on the walls of bus stop shelters and subway stations. Surrounding: contextual aspects such as the sky, shops, and pedestrians were also considered.

The aim was to capture these scenes on videotape and later examine them from the semantic, syntactic and pragmatic perspectives. Are the messages clear? Can the audience see the individual elements — the graphics, photos and text of the ads — at night as well as during the day? Do the visual messages reflect a sense of aesthetics?

Field Research: Visits to New York City and Toronto

The field research began with a two-day trip to Toronto at the end of November 1996, and continued the following week with a two-day trip to New York City.

Toronto Field Trip

Day One: With a camcorder in hand, this author began documenting the scenes along the streets of Toronto's downtown, along Yonge Street and the Elizabeth Street terminal. This intersection is the heart of the city, where bus and subway stations converge and where people congregate for work, shopping, and dining.

This researcher walked along the major downtown streets for half a day, exploring the commercial neighborhoods, the sidewalk scenes, and the outdoor environments. The researcher videotaped commercial advertisements and posters on bus stop shelters, on buses, along with bus murals, traffic and wayfinding signs, billboards, construction site posters, and graffiti on buildings, etc.

Since this was an exploratory venture aimed to familiarize the author with the urban transportation environment and to experiment with spontaneous videotaping, specific locations were not targeted; rather the researcher took buses and trains to random destinations.

The afternoon was spent riding the buses from the downtown, beginning in the Elizabeth Street terminal, to the outskirts of the city, concentrating mainly in the downtown business district. Videotaping centered on the interior signage of buses including wayfinding signs and advertisements, along with scenes from the bus windows.

Day Two: The following day was spent in the Toronto subway, beginning at the Richmond Hill subway stop. Videotaping began in the interior of the subway terminal capturing signs, maps and advertisements on the walls of the waiting areas and foyers. At this point, it became apparent that people (travelers) were also important subjects. Where the passengers walked, stood and looked provided the author with important insights.

For instance, if they stood on the subway platform 20 feet from a large advertisement but didn't look at it, this suggested that the advertisement maybe ineffectual from a pragmatic perspective.

This author also videotaped passengers waiting for the subway trains. Most of the passengers were standing by the side of the tracks because there were no benches to sit on. Most were looking in the direction of the oncoming train; some were reading books, newspapers and magazines; others were looking directly across the tracks at the posters on the wall, about 15 feet away.

When trains arrived, videotaping continued, but with a focus on the people inside the train, videotaped from the platform. Some passengers waved in a friendly fashion, aware that they were being videotaped. Videotaping was concentrated in one station to capture a general view of the activities inside a subway terminal during a typical weekday afternoon.

Following this, the researcher boarded a train, sat down and began observing the scene with the videocam focused on visual messages such as commercial advertising, wayfinding signs, and maps, and the passengers. (Since the ride was underground, very little exterior views were shot due to low lighting.) Next, the same views were observed, but from a standing position on the train. After a few stops, the researcher concluded the Toronto videotaping.

Reviewing the Process

Following the trip to Toronto, the researcher returned to Rochester to review the video-clips and prepare a strategy for the New York City field trip. After watching three hours of videotapes, the researcher realized that many important aspects were not caught on video in the Toronto study, mainly the passengers boarding and departing from trains and buses, as well as waiting for buses and trains. Also, due to the poor weather (ice and snow) encountered in Toronto, the scope was limited to a few districts of the downtown area because the author's camcorder froze.

New York City Field Trip

As a result of this analysis, the New York City trip was better planned and the goals were further refined. The author was able to gather more footage of passengers, which was better focused on where they looked. Also more details of visual messages were recorded, along with passengers' visual contact with, and reactions to, advertising. The author also spent more time videotaping the major transit stations in Manhattan. Two full days were spent in New York City.

Day One: The first day, two weekends before Christmas, was spent videotaping the subways, beginning at Grand Central Station and ending in the Soho district. Taping began at about noon in the entrance of Grand Central Station, focusing on the walls, which were filled with visual messages. People entering and exiting the station were also taped. Videotaping continued in the main foyer for about 20 minutes, which was crowded with local people, holiday shoppers and tourists. Most of the station's walls were dominated by giant billboards.

Next, the researcher entered a platform for the Crosstown Express train to Times Square and videotaped passengers arriving and departing from trains. Entering the Crosstown train, the researcher videotaped the interior of the subway car, focusing on the people, maps, signage, and advertising. The goal here was to capture the passengers' experience: their sense of personal space, what they saw on walls inside the train, and what they saw outside the train. Videotaping was done from both sitting and standing positions to gain two perspectives.

Transferring trains, taping continued on the platforms. After arriving in Soho, taping continued on the street level, along Broadway and Grand Street, down to Chinatown. The author focused on posters along construction sites, billboards on buildings and above buildings, signage in and around the subway entrances and on people.

After taping Chinatown, at about 3 p.m., the author took a subway to Times Square and continued taping outdoor street scenes in the remaining daylight. Times Square is unique for its explosive advertising, dominated by high-tech commercials, flashing lights, giant video screens, and sound and visual effects such as smoke and moving electronic words. The researcher returned to Times Square later on that night to capture the night-time scene. Though it was dark out, Times Square was illuminated by millions of lights with commercial advertisements dominating the scene.

Day Two: The second day in New York City was spent riding the buses around lower Manhattan, with stops to videotape the environs of Times Square and Penn Central. The researcher began by boarding a bus in Times Square and videotaping the interior advertising from various perspectives: in the front, middle and back of the bus, and from standing and sitting positions. Next, the view from the bus windows was taped: the street scenes, exteriors of passing buses, bus stops, street signs, billboards, posters, graffiti, marquees of stores and entertainment complexes, and people walking along the streets and waiting for buses.

After a few hours of riding the bus, the researcher exited the bus near Penn Central and began videotaping from the bus stop, focusing on passengers waiting for, and departing from, the bus. After about a half-hour of videotaping, while remaining stationary, the researcher began walking around the Penn Central neighborhood, videotaping people, posters, moving buses with side-wall ads, giant billboards with 3-D elements, etc.

Following this, the researcher entered a double-decker Apple Lines tour bus to videotape the graphic context of Manhattan from an elevated perspective. Since it was a guided tour, it provided a comprehensive overview of the city, slices of the most impressive sights of Manhattan and Brooklyn, from a tourist's perspective. Again the focus of videotaping was on the giant billboards, and temporary construction-site walls with posters sprawled across them, and graffiti-filled walls competing for the moving audience's attention.

New York City: Reviewing the Process

Since the New York City field trip was the second in the series, it was more productive than the Toronto trip because the author had become comfortable with the process of spontaneously videotaping people and places. (Some passengers resented being videotaped, as demonstrated by an incident in New York City where one angry passenger pushed the researcher's camera away.)

Unlike Toronto, night scenes were captured in the New York City videotaping, which added a dimension to the research subsequent analysis. In the evening in outdoor environments, some signs stand out more than others, particularly the back-lit advertisements at bus stops and train stations.

Identifying Design Problems

New York and Toronto

With the New York City taping complete, the researcher took the next step, a thorough analysis of the collected examples with an eye toward how the graphic designer can approach identified problems.

The author reviewed the videos, organizing the information according to recurring patterns of design problems. These include:

- Oversized advertisements on subway and bus station walls
- Ads placed behind waiting passengers in subway stations rather than in front of them (in the passenger's line of vision)
- Ads on walls of buses and trains that are obscured because they are placed behind seated or standing passengers
- Advertisements with too much text and or too small a type size in both bus and subway train interior and exterior environments
- Too many advertisements placed on one wall or venue creating visual clutter
- Bus murals with too much imagery, too many competing colors, and too much text, creating visual chaos

Next, the author captured 270 still photos from the 16 hours of video to identify and examine effective and ineffective design solutions. The videotapes were reviewed to capture key places that the eye traveled to, and focused on, from both sitting and standing positions on the trains and buses, and while walking along the streets of Toronto and New York City.

Selecting Critical Moments

In reviewing the 270 still photos in search of design patterns and problem, the researcher selected advertisements that were effective and ineffective in terms of the semiotic model, as discussed earlier in the Project Definition section. To make a comparative case study, ads were selected that either clearly communicated the messages in an eye-catching manner or failed to do so.

The still photos were organized based on four environment: subway interior and exterior and bus interior and exterior. Following this, the author created diagrams showing the passengers' views in these four environment and began identifying specific problems and solutions associated with each.

Analysis

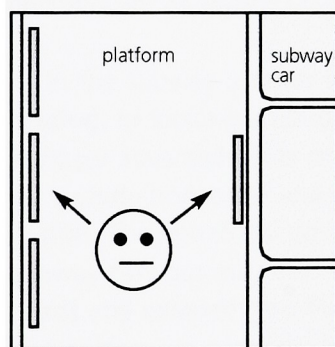
Where the Eyes Travel

For graphic designers working within urban transit environments, it is important to understand where the audience actually looks. This chapter examines where the passengers' eyes traveled, where they looked when waiting for, and riding on, a subway, train or bus.

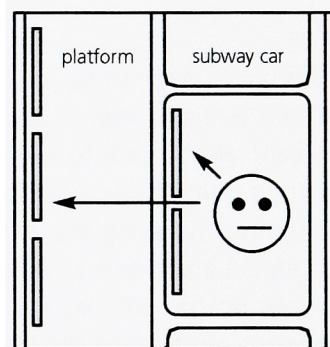
This Analysis section describes the four key urban transit environments that will be examined in the Synthesis and Ideation sections: subway and bus interiors and exteriors. It analyzes the perspectives of the passengers as they sit and stand in the trains and buses, and as they walk to train and bus stations and wait for vehicles to arrive.

The goal was to identify effective and ineffective promotional advertising and to understand how the movement of passengers (the audience) and the movement of visual message affect human observation, accessibility and ease of reading.

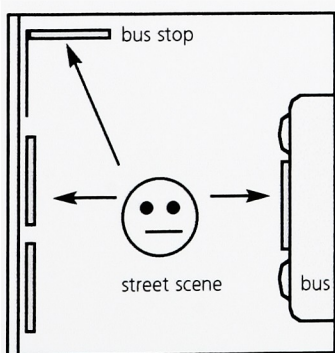
The following diagrams show the four passenger environment as detailed in the following pages.



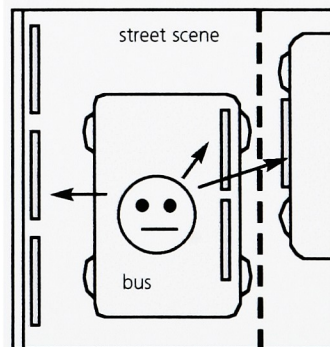
1 Subway Station Exterior



2 Subway Interior



3 Bus Exterior



4 Bus Interior

Analysis

Where the Eyes Travel

Subway Exterior

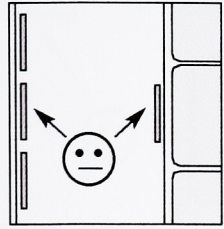


Diagram 1

This environment includes one passenger perspective: passengers standing or sitting on the subway platform or station waiting for the trains to arrive. While on the platform, passengers often read, look at the walls — at visual messages, wayfinding signs, maps and graffiti — or at other waiting passengers. Hence, their eyes look out at the surrounding.

Diagram 1 shows where the passengers' eyes might look within the subway station environment and it will be used in the following Synthesis sections.

Subway Interior

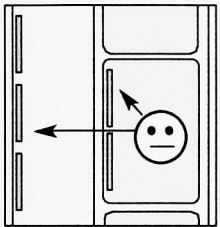


Diagram 2

This environment includes two perspectives 1) passengers seated or standing inside the subway car, looking at the interior view, and 2) passengers sitting or standing in the train looking out the windows at outdoor scenes. In the subway trains, the most dominant visual elements that passengers look at while glancing out of the windows (if they are not riding through darkened tunnels) are within street scenes. These may include passing traffic and pedestrians, billboards, and other visual messages located on the walls of station stops.

As in the subway exterior environment, passengers riding the train are engaged in reading, or looking around. They tend to look at either the floor, at each other, or the signage/ advertisements on the interior of the subway. Visual elements within subway car include horizontal and vertical posters, wayfinding signs and maps, and some graffiti. The horizontal advertisements are generally located across the top of the subway cars but may also be located in a mid-range height, behind the passengers heads and extending to the top of the car. The vertical ads, wayfinding signs, maps and posters are generally located at both ends of the car and near the exit doors.

Diagram 2 shows where the passengers' eyes look from inside the subway environment.

Analysis

Where the Eyes Travel

Bus Exterior

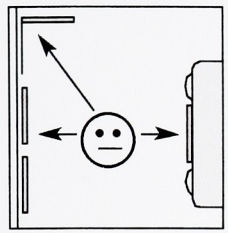


Diagram 3

This environment includes one passenger perspective: people standing or sitting at a bus stop or walking to the bus stop. The outdoor graphic design environment at bus stops and along the bus route includes a variety of visual media:

- Billboards located above street level, either on buildings or free-standing
- Murals including advertising messages and public art
- Posters located along bus routes on building walls, warehouse doors, construction site walls, utility poles, and bus stop shelters
- Back-lit bus stop posters placed inside and outside of bus stop shelters
- Bus murals, a relatively new form of advertising that cover an entire bus with a visual message; advertising posters displayed on the sides and the back of the bus.

Diagram 3 shows where the passengers' eyes look from the outdoor bus environment.

Bus Interior

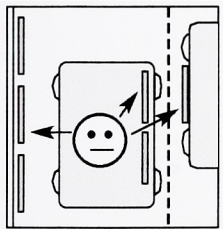


Diagram 4

This environment includes two perspectives similar to the Subway Interior perspective: 1) passengers' view from inside the bus, either seated or standing, and 2) passengers' view from a seated or standing position looking outside (see Subway Interior section on p. 20).

Diagram 4 shows where the passengers' eyes look from the interior bus environment.

What Urban Transit Passengers See

In this chapter, the information gathered from the 16 hours of videotapes of the Toronto and New York City trips is synthesized. The author organizes problems that designers face in urban transit systems based on the semantic, syntactic and pragmatic evaluation method as described on page 7.

Here, the author closely examines what is being communicated, how, and how effectively it is communicated. To briefly review the semiotic model:

The semantic dimension looks at the effectiveness of the message or the relationship of the visual image to its meaning.

The syntactic dimension examines the effectiveness of the formal properties of the visual message such as the aesthetic properties, and harmony of the visual elements.

The pragmatic dimension looks at the effectiveness of the functional aspects of the graphic design, specifically, whether the passengers can clearly see the image and text.

The effectiveness of the promotional advertisements are evaluated based on the semiotic model.

The problems are considered from four passenger perspectives – subway interior and exterior and bus interior and exterior, as indicated by **Where-the-Eyes-Look** symbols. The solutions to these problems will be presented in the following Ideation section.

Subway Environments

Subway Exterior Environment

Problems

Most of the subway systems of North America were built in the beginning of the 20th century, before public advertising became a major source of transit operation revenue. New York's first subway opened in 1904 and Toronto's, in 1954. Clearly, very little consideration was given to advertising needs as evidenced by the large cement columns that block passengers' views of subway billboards and poor lighting that diminishes the views. Added to this, some billboard walls are large and others are small, some are curved and others are hidden behind columns or posts. There appears to be no master graphic design plan for subway advertising. The focus of today's transit advertising administrators seems to be with ad revenues: by placing as many ads as possible in a space, it seems that planners hope to yield the greatest profits. The following are problems that exist in the subway exterior environments:

Pragmatic Problems

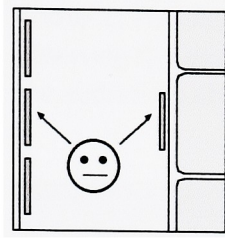
Over-Size Billboard: Since many billboards and posters are designed for outdoor billboards (distance viewing), when they are placed on subway walls, passersby often cannot see them in their entirety because they are too large to see at such a close distance. This is a pragmatic problem because it presents a functional shortcoming.

Poor Lighting: Often, lighting on the subway platform and in the subway's walking tunnels is so dim that passengers cannot see the graphic design environments. This presents a pragmatic problem again because of a functional shortcoming.

Poor Placement: Even though the visual messages of some posters may be very powerful, they are not always seen because of poor placement on the walls. Often graphic design display spaces are obscured by poles and sometimes they are situated behind waiting passengers so that the intended viewers have their backs to the ads. This presents a pragmatic problem because the message is obscured.

Synthesis

Subway Environments



Subway Exterior Environment

Documented Problem

Photo 1: The passengers are waiting for the subway car looking toward the tracks with their backs to the wall. The big billboards are located behind the passengers who cannot see the ads. Also, the billboards are situated too close to passengers for optimal viewing, and can be physical damaged. For example, when passengers lean against the walls, friction, in combination with wet clothing, can damage the billboards. The ads are also subject to vandalism since they are within easy reach.



Photo 1

Synthesis

Subway Environments

Photo 2: The disproportionately large size of the billboards prevents passengers from observing the design from close viewing distances. The narrow subway platform restricts the audience's ability to view the oversized billboard in its entirety at a distance.



Photo 2

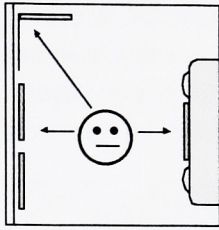
Photo 3: The dividing support poles of the subway station obscure the passengers' view of large areas for display. Furthermore, this area is dark and poorly lit.



Photo 3

Synthesis

Subway Interior Environment



Subway Interior Environment

Problems

Subway cars host a range of visual messages, posters, signs and maps — many of which do not function effectively due to their placement, large amount of text, and small type size.

Poor Placement: Some promotional advertisements, wayfinding signs and maps inside trains are placed behind and slightly above the seats rather than above them and are obscured by seated or standing passengers. This is a pragmatic problem because viewers cannot readily see the signs in their entirety. Also, due to the poor placement of advertisements and maps alongside the doors, also behind seated passengers, viewers cannot easily see them. Often, passengers need to enter another passenger's personal space in order to read the posted message, which can be uncomfortable for the seated passenger. This presents a pragmatic problem in that the signs are not readily visible.

Too Much Text: Some posters located in subway cars contain too much text. Often, the message runs on for 5 or 10 sentences, which requires too much of the riders' limited attention in a moving and chaotic environment. This presents both pragmatic and, indirectly, semantic problems, because the poster does not serve its function and the message is not readily communicated.

Type Size Too Small: Often the text is too small for the average passenger to read, and this presents a pragmatic concern.

Synthesis

Subway Interior Environment

Documented Problem

Photo 4: Subway passengers are usually sitting or standing in front of vertically oriented subway posters and maps with their backs against the posters. Maps are equally important to passengers, yet their placement, which often is too low, is obscured by passengers' heads.

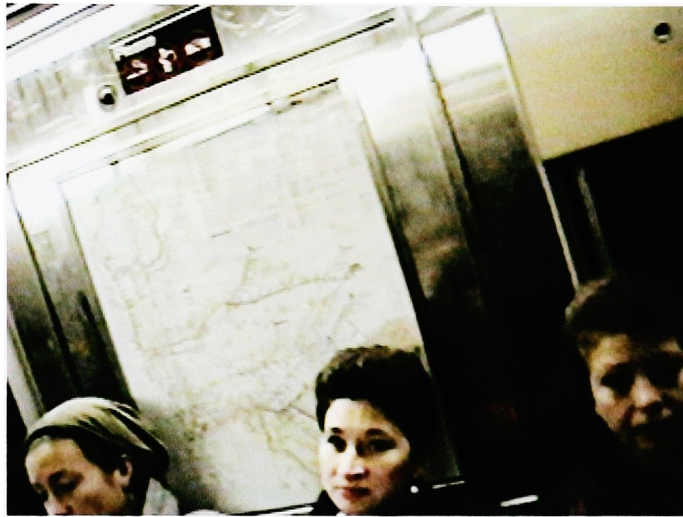


Photo 4

Photo 5: This poster contains too much text, and is in a type size that is too small. Passengers cannot be expected to make the effort to read a poster, and often ignore the task altogether.

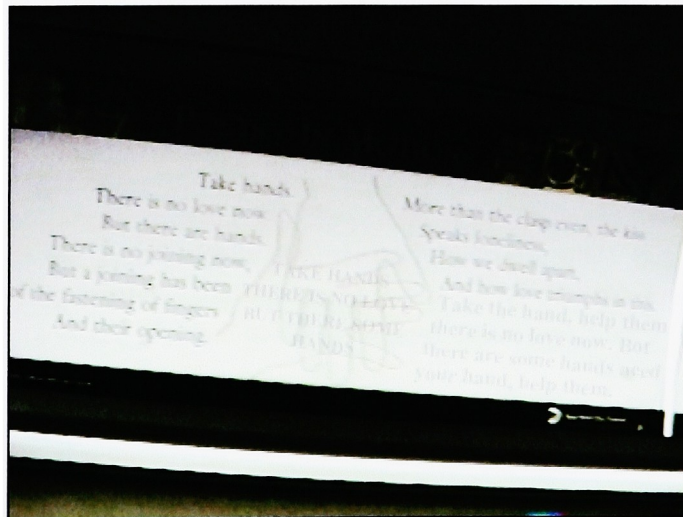


Photo 5

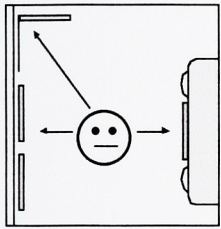
Synthesis

Bus Environments

Bus environments include bus stops (some with Plexiglas shelters) and bus stations where a number of buses converge. Bus stations are often underground or street level complexes. This environment also includes the exterior of buses, which host numerous advertisements, public service notices, and large ad murals. Over the past 10 years, murals have grown in popularity as funding for public transportation has decreased and has forced transit systems to rely more heavily on advertising revenues. (Transportation Research Board, 1998)

Problems

Bus Exterior Environment



The environments along the bus routes, like the subway environment, contains numerous advertisements placed in a chaotic manner on outdoor billboards, bus stops, construction sites, and in bus stations. The sheer number of ads creates a visual competition. To win this competition, sponsors will often place multiple, identical ads on the same wall. The bus environment problems are outlined below.

Too Much Text in Bus Murals and Side-of-Bus Ads: Most bus billboards contain too much text, which makes it difficult for pedestrians to grasp the message quickly. This presents a pragmatic problem because it does not deliver the message and the text occupies space that could be better used for a visual message. This results a semantic problem because the ad fails to effectively communicate a message.

Too Much Text on Posters: Often, outdoor posters contain too much text, which makes it difficult for passengers to read the message. This presents a pragmatic problem because the message is obscured.

Too Many Ads Placed in One Area: Often, to publicize an event, or product, marketers will post multiple, identical posters or ads next to each other on a wall. Many non-profit arts event posters are placed on walls and buildings: apartment entrances, construction sites, utility poles, building walls, and bus stops. This, added to the large quantity of other posters on the walls, bus stop shelters and construction sites, creates visual confusion and often renders the messages meaningless. This is a pragmatic problem in that it creates visual pollution.

Synthesis

Bus Environments

Documented Problem

Photo 6, 7: Different kinds of billboards placed in close proximity to each other result in visual chaos in Times Square, New York. Billboards, panels, and store signs are placed next to each other without considering how their combinations impacts individual visual messages. This causes billboards, signs, and posters to be indistinguishable from one another.



Photo 6



Photo 7

Synthesis

Bus Environments

Photos 8, 9, 10: Advertising agencies are often not in control of the placement of repeat-use ads, which leads to visual pollution. The following examples show the indiscriminate placement of posters that cause visual pollution and obscures many of the advertising messages.



Photo 8



Photo 9



Photo 10

Synthesis

Bus Environments

Promotional Advertisements at Bus Stops

Another location for transportation advertisements is bus stops, which include posters on the exterior and interior of the bus shelters.

Problems

Too Much Text: This, makes it difficult for passengers to grasp the message, and presents a pragmatic problem because it prevents the ad from succinctly delivering the message.

Not Enough Light: At night, the posters on the outside of the bus stops are not visible because they are not illuminated from within or from outside. This is a pragmatic problem because pedestrians and passengers cannot see the advertisements.

Documented Problem

Photo 11, 12: Exterior Bus Stop ads often contain too much text, which makes it difficult for passengers to grasp the message. Also, the posters on the outside of the bus stops are not visible because they are not illuminated from within or from outside.



Photo 11

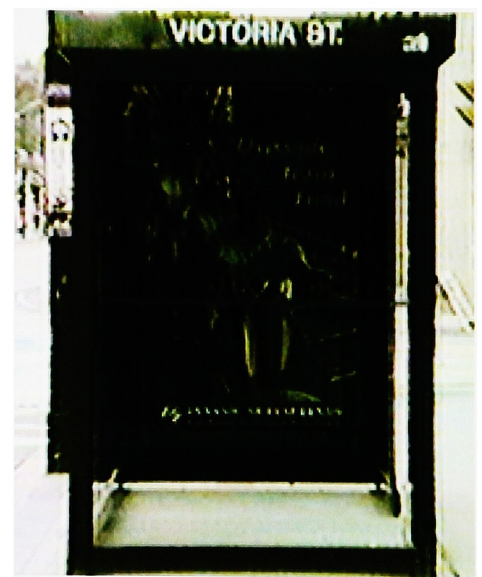


Photo 12

Synthesis

Bus Environments

Promotional Advertisements on Bus Exteriors:

Problems

Competing Images on Bus Murals and Side-of-Bus Ads: Bus exteriors host visual messages (large bus-length murals and ads). Sometimes the murals include too many competing images and too much text, which creates visual clutter. This is a pragmatic problem as the audience cannot comprehend the message.

Documented Examples

Photos 13, 14, 15: Too Much Text: Exterior bus ads often contain too much text, which makes it difficult for passengers to grasp the message.

Too Many Ads on Side of Bus: Often a dozen ads of various colors and styles are placed along the side of a bus, which causes visual overload; as noted earlier, this causes the audience to tune out – a pragmatic problem.

Confusing Imagery: Often, the ads on the side of buses contain conflicting images, which makes the message unclear – a semantic problem.



Photo 13



Photo 14



Photo 15

Synthesis

Bus Environments

Promotional Advertising in Bus Interiors

Like the subway car, the bus interior has two poster orientations: horizontal and vertical. In some buses, like subway trains, passengers face the front of the car, or they face the side. Designers need to be aware of this because depending on the passenger's orientation (front- or side-facing), the ads may be obscured by seated or standing passengers.

Problems

Poor Placement of Posters: Vertical posters and regulatory signs are often placed on the left and right sides of the bus doors, which may be obscured by passengers sitting and standing by the doors. To actually read the poster, a passenger must move into the personal space of a seated or standing customer, which is awkward for both parties. This presents a pragmatic problem.

Too Much Text: As noted earlier, posters with too much text can overwhelm the audience because they require too much work to read them – a pragmatic problem.

Documented Examples

Photo 16: Poor Placement of Posters: Vertical posters often placed on the left and right sides of the bus doors are blocked by sitting and standing passengers.

Photo 17: Too much Text: As noted earlier, posters with too much text tend to lose most of the audience because too much work is required to read them and most passengers are not motivated to read long messages.



Photo 16



Photo 17

Synthesis

Summary

This section presents several major problems designers face in creating effective promotional advertising for the four venues examined. These problems are synthesized in terms of the semiotic model. The following is a summary of these problems, all of which are pragmatic:

- Size of billboards, too large: subway stations
- Insufficient lighting: all four venues
- Poor placement of ads: all four venues
- Too much text: all four venues
- Type size too small: all four venues
- Conflicting visual elements: all four venues
- Too many ads placed in one area: outdoor venues
- Competing images: all four venues

The next section, Ideation, presents solutions to these problems.

Ideation

Subway Environment

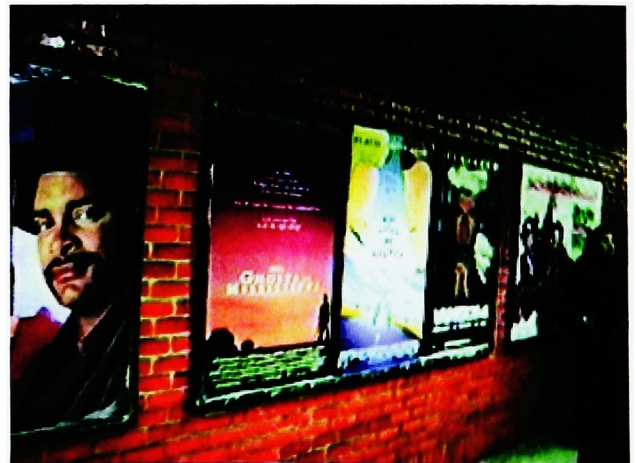
This section presents potential solutions to the problems as outlined in the synthesis section. It must be pointed out that many of these solutions, such as adding additional lighting or placing several smaller ads in one large billboard space, are generally not in the graphic designer's task domain. However, these solutions are presented as additional tools for the designer, and for transit advertising administrators to assist in improving the effectiveness of transit advertising. Also, simply by being aware of these problems, the designer can create more effective designs by incorporating these considerations into their problem solving process. The design solutions appear in the following section as Problem and Solution photos and descriptions.

Subway Exterior

- Problem** **Poor Size Decisions:** Many billboards in subway stations are far too large to allow the target audience to comprehend them from a close distance (often 10 feet or less). This problem exists because billboards are designed for large outdoor spaces and distance viewing. The narrow confines of the subway platform restrict the audience's ability to move back and adjust their viewing range. (Problem 17)
- Solution** **Appropriate Size Decisions:** The visual displays must be sized appropriately to accommodate the viewing distance of the audience. The designer must design simple images with minimal text and highly contrasting color decisions so that they can be seen from close or far viewing distances. Subtle contrasts should be avoided. In addition, rather than placing one large advertisement in one space, two or three smaller ads can be placed in one billboard space. (Solution 17)



Problem 17



Solution 17

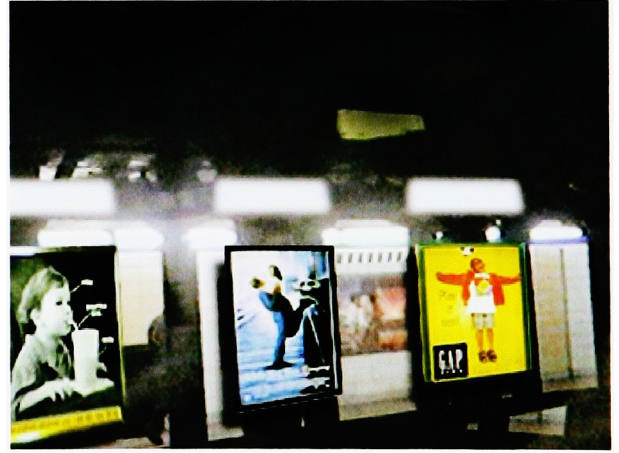
Ideation

Subway Exterior

- Problem** **Insufficient Lighting:** In subway stations, lighting around advertisements is often weak or non-existent. (Problem 18)
- Solution** **Sufficient Lighting:** Additional lighting can be added in the form of ceiling lights, footlights, and back-lit displays to illuminate the ads. Designers should create stark contrasts and use simplified imagery. For example, they could use dark colors for images on white backgrounds and dark, bold text to create high contrast and increase visibility. (Solution 18)
- Problem** **Poor Placement :** Often advertisements are ineffectively placed on walls, sometimes behind the audience or obscured by poles or other obstructions. (Problem 18)
- Solution** **Successful Placement:** Place advertisements in areas where the audience will be facing them. On subway platforms, the audience generally faces the direction of the oncoming train and the audience tends to look out toward the tracks. Place posters on large poles or between tracks (supports must be built) as in Solution 18, Solution 19a, 19b.



Problem 18



Solution 18

Ideation

Subway Exterior

Solution Continued

Actual Example: Avoid placing advertising posters behind the subway's waiting benches, as people generally do not look behind them. However, walls behind passengers waiting for a train are a good place to situate wayfinding signs and maps because riders need to be close to read them and they often look on the walls for this information. (Solutions 19a, 19b) A solution is to place billboards on the opposite wall in a front-facing perspective as shown in Solution 19a in a Toronto subway station. In Solutions 19a and 19b, the placement of the posters on the wall across from the waiting passengers on the platform allows them to see the billboards better. This is in contrast to Problem 19, in a New York City subway station, where the billboards are located on the wall behind the waiting passengers on the platform.



Problem 19



Solution 19a



Solution 19b

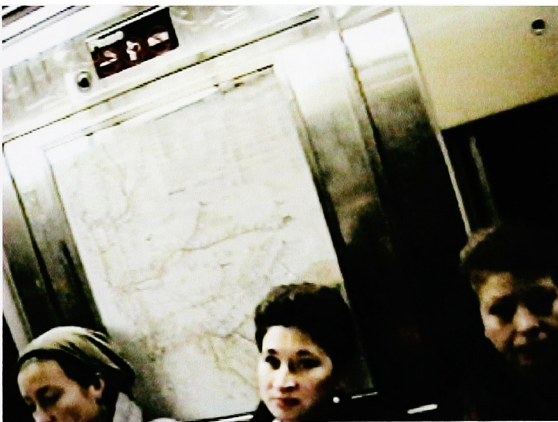
Ideation

Subway Interior

Subway Interior

Problem **Poor Placement:** Some subway maps and promotional ads inside the train are often poorly placed, especially the vertical-format posters near the doors. Some posters are not high enough for passengers to see, and sometimes, passengers must lean into others' personal space, which is awkward and may prevent some people from seeing the visual messages. (Problem 20a, 20b)

Solution **Successful Placement:** Either place these posters above the passengers' heads or if necessary, do not use vertical posters near the doors as they can be obscured by seated passengers. Situate horizontal posters above the passengers, along the length of the subway cars. (Solution 20a) When possible, designers should place text at the top of the design so passengers can read the text above the other passengers' heads. (Solution 20b)



Problem 20a



Solution 20a



Problem 20b



Solution 20b

Ideation

Subway Interior

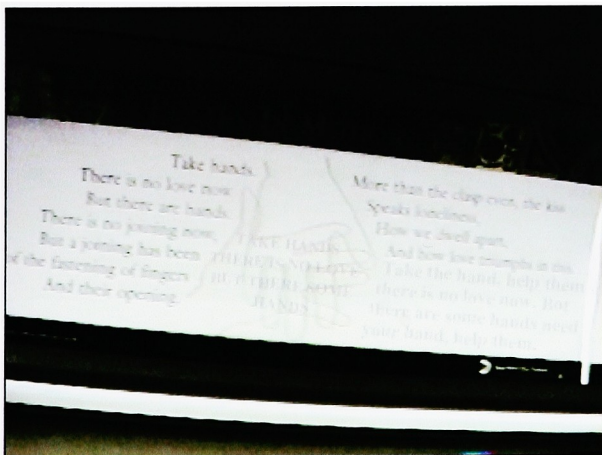
“The poster needs to stand out from its surroundings to create an eye-arresting disturbance as different in texture from its environment as possible. If not, or if the message is confused or the lettering unclear, the communication is frustrated. He who runs carries on running, none the wiser.” (Bernstein, p. 72)

Problem **Too Much Text:** Posters that contain too much text can overwhelm the audience and can cause them to lose their attention. When people are in transit, with many distractions (auditory and visual noise, etc.), they do not have a long attention span, and hence, too many words can tax their attention. (Problem 21)

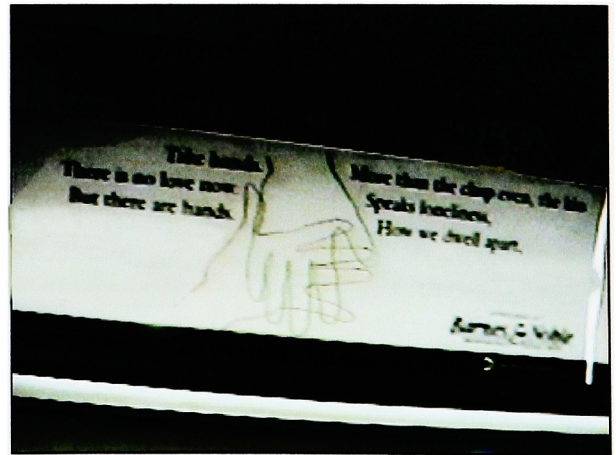
Solution **Limit the Text:** Keep the message short and succinct. Some of the best ads are one or two words. Try to limit messages to as few sentences as possible; one sentence is ideal. (Solution 21)

Problem **Small Point Size:** Often the type size is too small for the average passenger to read. This occurs because posters are often designed without considering viewers' distance. Also, sponsors aim to maximize the amount of information delivered without consideration of the audience's attention span.(Problem 21)

Solution **Readable Point Size:** Designers should use point sizes that are easily readable from a distance of 20 feet. As noted in the previous example, designers may have to cut text to enlarge the point size. Although this is often out of the designers' control, they can recommend this solution. (Solution 21)



Problem 21



Solution 21

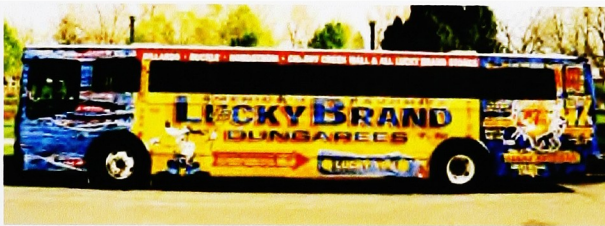
Ideation

Bus Environment

"Time is not on the poster designer's side. The street is no place for storytelling or detail." (p. 68, Bernstein)

Problem **Too Much Text:** Many bus murals and bus-side ads contain unnecessary text, making it difficult for passengers and pedestrians to quickly grasp the message. (Problems 22a, 22a)

Solution **Limit the Text:** Simplicity can create directness. Keep the amount of text to a minimum; one sentence is ideal. (Solutions 22, 22b)



Problem 22a



Solution 22a



Problem 22b



Solution 22b

Ideation

Outdoor Poster

Problem **Too Much Text:** Posters that contain too much text can overwhelm the audience and lose their attention. (Problem 23)

Solution **Limit the Text:** Again, the rule is, keep it simple so that passengers and pedestrians can grasp the message at a glance. Keep the text to a minimum. (Solution 23b)



Problem 23



Solution 23a

Problem **Repeated Identical Ads:** Often, marketers post multiple, identical posters next to each other on outdoor walls, construction sites, in bus shelters, etc. to attract the audience's attention. In fact, the eye needs variation and the sameness of these posters can create boredom or visual overload for the viewer, rendering the individual message meaningless. (Problem 23)

Solution **Slightly Alter the Ads:** Since this practice is likely to continue, designers can create similar posters but with slightly different imagery or composition. This could attract the audience's attention more effectively due to the slight variation. (Solution 23b)



Solution 23b

Ideation

Bus Stops

Problem **Insufficient Lighting:** At night and during some day-time conditions, the non-back-lit posters on the outside and inside of the bus stops are difficult to see. (Problem 24)

Solutions **Sufficient Lighting:** Similar to the solution for insufficient lighting in the subway stations, lighting fixtures should be added (see p. 36).

Create Contrast: Create stark contrasts between imagery and text. For example, use dark colors for images on light backgrounds and dark, bold text to create contrast and higher visibility. Also, design simple imagery to increase readability.

Transit administrators can add lighting to bus stop interiors and exteriors, and use back-lit displays to illuminate the ads. (Solution 24)



Problem 24



Solution 24

Ideation

Bus Stops

Problem **Too Much Text:** Posters that contain too much text can overwhelm the audience and lose their attention. (Problem 25)

Solution **Limit the Text:** The solution for this problem is the same as for the subway (p. 36): Keep the message short and succinct. Some of the best ads are one or two words. Try to limit the message to as few sentences as possible. (Solution 25)



Problem 25



Solution 25

Ideation

Bus Interior

- Problem** **Poor Placement:** Vertical posters and regulatory signs are often placed behind seated passengers, who obscure them. To read the poster/sign, passengers must lean into the personal space of the seated or standing passenger. (Problem 26)
- Solution** **Successful Placement:** Use horizontal posters and place them above the heads of the passengers, above the windows if necessary. (Solution 25)



Problem 26



Solution 26

Ideation

Bus Interior

“Alain Weill, the French guru of the poster, says that of every three posters that he is asked to judge at an annual festival he finds two hard to decipher. As if there is time! The creative director... never judges a poster at his desk: he asks the designer to hold it at head height and then runs past it!” – pg. 72 Bernstein.

Problem **Too Much Text:** As noted earlier, posters with too much text can overwhelm the audience because it requires the audience to too much effort in order to read them. Since passengers' attention span is limited, too much text can overwhelm them. Also, too much text often forces the use of a smaller point size, which hinders readability (see p. 39). (Problem 27)

Solution **Limit the Text:** Similar to the previous solutions for this problem (see pp. 39, 41, 43), keep the message succinct. Limit the message to a few words or sentences, if possible. (Solution 27)



Problem 27



Solution 27

Conclusion

This project has provided the author with numerous insights into the design issues inherent in the urban transit environment. Through research, field trips, videotaping, and the synthesis and analysis of the videotaped images, the author has explored the basic issues and considerations for effective message making for transit environments. Through this study, the author has identified several factors that impact the effectiveness of the visual message – the constantly moving audience and their consequent short attention span. Other factors are space and lighting limitations, audience perspectives, poor placement of advertisement messages, and poor planning. While graphic designers cannot control many of these factors, they must be aware of them in the design process, and can make valuable recommendations.

In addition to the principles of transit advertising design, the author learned an important lesson by looking at transit messages from a passenger's point of view. Often designers can lose sight of the audience's perspective. It is important for designers to move out of the confines of the office and explore the world through the eyes of the audience – the passengers, and to see first-hand the perspectives of this audience, including visual and auditory stimuli, lighting, interpersonal verbal and nonverbal cues, architectural barriers, – to name a few.

When creating messages for an audience as diverse as that found in urban transit environments – people of all races, ages, and socio-economic backgrounds – and an audience in constant motion, one realizes that the key to success is simplicity. If one overriding lesson can be learned from this study, it is “Keep it simple.”

Indeed many factors affect the power of a design and its ability to send out a clear message. Different from designing visual messages for other media such as print or electronic media, the creativity and genius of the design itself often does not determine its overall effectiveness. Successfully incorporating several elements and environmental factors into the design process is key to creating effective visual messages for the transit environment. To assist graphic designers in this process, the author presents a set of guidelines pertinent to the urban transit environment. These guidelines, summarized in the following section, are organized based on the semiotic model, which has shaped this study.

Guidelines for Graphic Designers

The Semantic Dimension:

- Is the message clear?
- Do the words and images communicate the intended meaning?
- Do the words and images reflect a coherent theme?
- Can passengers of various cultures, ages, backgrounds, and socioeconomic levels understand the message?
- Can the message be successfully communicated with a minimum of words?
- Does the message convey just one or two thoughts? (Bernstein, p. 68)
- Does the form follow function?

The Syntactic Dimension:

- Are the formal characteristics of the design solution — typography, color, image, format — in harmony?
- For multiple placement of identical posters, can slight visual variations on a theme be created to better engage the audience?
placed in multiple posters adjacent to each other on a wall?
- Does the design contain colors (both bright and subdued) that balance and support each other?

The Pragmatic Dimension:

- Can the audience see the design clearly from various viewing distances?
- Does the design contain contrasting colors to better enable the audience to see it during day and night?
- Is the type size large enough so that the audience (including elderly people) can read it comfortably from afar?
- Can the design be successfully enlarged and reduced?
- Does the imagery and typography contain strong contrast?
- Is the contrast ratio of type to background strong enough to ensure good legibility.
- Does the design use contrasting colors to accent the image?
- Is the text in ads in the upper portion of the composition to better enable passengers
to read the message above the heads of other seated passengers?

Guidelines for Urban Transit Advertising Administrators

While this study is geared for graphic designers, the findings can assist urban transit officials in maximizing the effectiveness of the advertising, and the informational, instructional, and wayfinding signs. In general, transit advertising officials need to re-examine existing environments to provide sponsors better opportunities for the visual display of the message.

The following guidelines can assist transit advertising administrators in this process:

- Add lighting to all venues: bus stops, subway stations, and in buses and train cars to illuminate the ads. (Pragmatic issue)
- Rather than placing one large billboard in a subway or bus station, which can be difficult for the close-up audience to see in full, consider putting several small posters in one large area. (Pragmatic issue)
- In subway and bus stations that have large support columns, consider building supports on or between the columns so that promotional advertisements can be placed on them. This creates additional advertising space and efficiently uses the columns. (Pragmatic issue)
- Be aware of riders' perspective. Avoid placing promotional advertising or signage behind passengers standing or sitting, waiting for a train or bus because they rarely look behind them; place visual messages where passengers look: in the direction of the train or bus and out across the tracks or street. (Pragmatic issue)
- In buses and subways, sometimes promotional ads, maps and wayfinding signs are placed behind seated or standing passengers who obscure the design. In other instances, to read wayfinding signs or maps, passengers must move into other passengers' personal space. To address this problem, place signs and ads above passengers, horizontally along the upper wall of the bus or train. (Pragmatic issue)
- Try to limit the number of ads placed in one area to reduce visual noise or, consider placing clear borders between ads.

Conclusion

These suggestions are by no means new ideas, but they are key issues for designers and urban transit administrators to consider. Many criteria impact the effectiveness of visual communication in transit advertising, including architectural structure, the audience's viewing distance, the number of advertisements competing for viewers' attention, compositional integrity, legibility (typeface and type size), readability (amount of text), lighting, etc. Designers can control some of these elements but not all of them.

In essence, graphic designers must become aware of the complexities involved in designing visual messages for urban transportation environments, and balance these environmental factors with the messages they intend to convey.

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www.signs.org — This site offers information for wayfinding signs.

www.gotransit.com/station — Toronto Subway information

<http://scriptorium.lib.duke> — History of advertising site

Glossary

Back-lit	A process whereby advertisements are electrically illuminated from within. A light source is placed inside a Plexiglas or plastic covered box, which illuminates an ad.
Visual messages	Advertisements, billboards, posters, back-lit signs at bus shelters and in subway stations, wayfinding signs
Promotional Advertisement	Usually two-dimensional advertisements, billboards, posters, back-lit signs, etc. that promote products or services.
Pragmatic	The pragmatic dimension looks at the effectiveness of the functional aspects of the graphic design, specifically, whether the passengers can clearly see the image and text.
Wayfinding signs	Directional Signs that provide the public with navigational information on where to go for specific trains, streets, exits and entrances and where to buy tokens. In subways and bus stations, these signs may contain words or words and arrows, maps, listings, color-coded route information, etc.
Semantic	The semantic dimension looks at the effectiveness of the message or the relationship of the visual image to its meaning.
Syntactic	The syntactic dimension examines the effectiveness of the formal properties of the visual message such as the aesthetic properties, and harmony of the visual elements.

Appendix

E-mails

From: Özlem Dessauer

Dear fellow members,

I'm a graduate graphic design student and working on my master degree thesis documentation. My topic is Graphic Design in the Urban Transportation Environment (graphic design such as; promotional advertisements, wayfinding signs, informational signs, for subway tunnels, subway cars, buses, bus stops, outdoor, etc.). I need any articles or publications relates with my topic, so far I have not had much luck. Do you know any articles or publications that relates with my topic? I really appreciate your help and I look forward hearing from you. Sincerely, Özlem Dessauer.

From: LynneB@ARRB.ORG.AU

Thank you for your email.

ARRB Transport Research has not done work on this topic but I have checked our library's database and the attached file contains some references which I hope will be of use to you. You should be able to obtain copies of them through your library.

Regards,
Lynne Beaumont

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From: Csmith409

Hi Ozlem,

Please visit our website www.naaee.org and check the publications section. You will find a complete listing of the publications available and a brief synopsis of each. There may be something that will assist you.

Connie Smith
NAAEE Member Services

Appendix

E-mails

From: segdtalk@news.networkats.com
Gaelscot@aol.com

Two of my books, "City Signs" and "Urban Graphics," talk about signs in urban environments. While most of the featured projects are private developments, several bus and road systems are covered. "Urban Graphics" also has an article about the typeface Don Meeker helped develop for highway use.

"Signs of the Times" used to do a lot of articles on billboards and the legal issues surrounding them. If they don't cover it anymore, they might know who does. Does anyone remember the new name for the National Electric Sign Association? It's something International, now. They sponsored research and lobbying about sign issues, including billboards and signs on highways.

There isn't much info out there on any of these topics, but you'll find some if you dig. Good luck --

From: segdtalk@news.networkats.com
JackBie@aol.com

<< Does anyone remember the new name for the National Electric Sign Association? >>

They are now called ISA (International Sign Association). I believe they have a website.

Jack B

From: segdtalk@news.networkats.com
SEGDOFFICE@aol.com

ISA's website is www.signs.org for anyone needing to know.

Nadia Adona
Office Manager
SEGD

Appendix

E-mails

From: joelc@kiwilink.co.nz

Hi Ozlem

Thanks for this.

You are welcome to hunt through the links in ecocitymagazine.com's transportation topics. Many of them contains graphics relating to transportation.

I don't have any specific information myself.

Regards, Joel Cayford (for ecocitymagazine.com)

Janet Holmes & Joel Cayford & Team Video Pacific
teamvideo.net, ecocitymagazine.com, watermagazine.com
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Ph/Fax: +64 9 445 2763. Auckland, New Zealand.

**From: segdtalk@news.networkats.com
ad@dudrowdesign.com**

US Department of Transportation in Washington has a fairly extensive library (at least it did many, many years ago) of articles, research, on public signage. Probably other state DOT's do also.

**From: segdtalk@news.networkats.com
rich@gnutwo.com (richard burns)**

I believe that in 1987 the recipient of a SEGD student scholarship did a similar study. You might check with the national office to see if they archive the scholarship applications of get the end studies.

Richard Burns

**From: segdtalk@news.networkats.com
lesliegd@voicenet.com (leslie gallery dilworth)**

There used to be a magazine called Signs of the Times - mainly a trade magazine for the sign fabrication industry but they did feature articles on signs dealing with many different issues as I recall. They also publish books on signs. Don't know how helpful this may be, but look them up _ you may find something there.