



Trends Analysis of Manual Signage Technology in Ghana

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ABSTRACT

The art of manual signage production emerged in the Gold Coast in the early part of the 20th century when local craftsmen and artisans imitated the text and illustrations of signs imported into the country by the colonial administration and merchants to develop skills of lettering and stenciling which subsequently, developed into a local craft called sign writing. The art flourished through series of technological developments until computer graphics and digital printing emerged in Ghana. Anecdotal evidence indicate that these trends have not been documented comprehensively therefore creating a huge deficit of authentic historical information on the evolutionary trends of signage technology in Ghana. The study aimed at conducting historical research into the developmental trends of manual signage technology in Ghana and documents them for posterity. The study was limited to Accra metropolis and adopted the interpretivism paradigm. Qualitative research approaches were used to conduct the study. Two traditional sign writing shops and four large-scale outdoor advertising agencies were purposively selected and a total of sixteen respondents were used. Unstructured observation, unstructured interview guide, document study and still-picture photography were used to gather data for the study. The data was recorded manually and electronically, the photographs were sifted and edited and the texts were manually transcribed, coded and analysed. The results revealed that manual signage technology started in the Gold Coast in the 1930s through experimentations by local craftsmen and visual art graduates from Achimota College. Since then the craft has gone through series of technological developments to date, but the inception of computer graphics and digital printing in Ghana in the 1990s and the year 2000 respectively, continue to reduce the patronage of manual signage drastically in Ghana. The study therefore recommended that, communication design departments, graduates and students in Ghana must be empowered to research into various aspects of communication design in Ghana and document them. Also, local sign writers who lack



skills in computer graphics must learn the art so as to make them competitive in the industry.

Keywords: Manual signage production, Signage art and Sign writing.

1.1. INTRODUCTION

The word Signage is synonymous to poster but according to Getlein (2002), the word "Poster" is a generic term used to describe all forms of visual communication works that communicate specific information to the general public and which are posted outdoor. Getlein's definition of poster is buttressed by Kurankye (2014) who described posters as printed or painted graphic design works that are posted outdoor to give information to the public or advertise goods and services. Kurankye (2014) further described one major characteristic of outdoor posters as; they are often posted at open places which expose them to harsh effects of atmospheric elements such as rain, sun, dust, etc. His concept of poster as a printed media was also buttressed by Cambridge International College (2012) which emphasized that posters fall under types of print media. Tuckwell (1992) therefore gave examples of posters as billboards, signboards, signposts, banners, wall branding, replica signs, transit signs, etc. A reflection on the scope of poster as described by the above authors reveal that signage falls under one category of posters. This observation of the researcher is buttressed by Stewards (1984) who referred to billboards, signboards, signposts, and banners as examples of signage.

Even though the antecedent of outdoor signage can be traced from ancient Greek, Babylonian and Egyptian empires, according to Design History.org, (2011) the genesis of modern poster art can be traced from France. Design History.org, (2011) reported that the first printed posters were called broadsides which emerged in Europe during the renaissance period. The printed posters were made possible by the invention of moveable type by Johann Gutenberg in 1445 which subsequently unfolded letterpress printing. This invention ushered in the craft of typography across Europe and which lead to the invention of different types of typefaces by renowned typographers like Eric Gill, Bodoni, William Morris, William Caxton, Baskerville and others (Dannis and Jenkins, 1988). Dannis and Jenkins, (1988) reported further that the maximum size of the broadsides was about A2 and they contained much text with few silhouette illustrations rendered through engraved intaglio printing.

The broadsides dominated the outdoor advertising industry until the invention of lithographic printing by Alois Senefelder in 1798 which was subsequently developed into a mechanical process called off-set lithography. Around that period another invention was

made by Joseph Niepce in 1824 that was able to develop a chemical that could photograph or transfer images onto a copper-like plate called pewter. Niepce's technology went through series of reformation for years until a perfect still-picture could be printed on paper. Joseph Niepce is therefore accredited as the father of still-picture photography which is a vital tool in contemporary outdoor poster design.

Gallery.sjsu.edu, (2016) reported that In 1867, a renowned French Painter called Jules Cheret through curiosity, experimentation and innovation used principles of still-picture photography and lithographic printing to produce the first coloured pictorial outdoor posters. His posters depicted a highly stylized form of outdoor poster that thoroughly integrated text and image. Art Source International Inc. (2012) for instance reported that, Jules Cheret's captivating depiction of the entertainers of Parisian nightlife poster, rendered in clear, radiant colors, dominated Paris displays for the last 30 years of the 19th century and also attracted others to the medium. This reportage was confirmed by Gallery.sjsu.edu, (2016) which recounted that modern poster design was introduced in France by Jules Cheret in 1867 and pointed out that due to Cheret's immense contribution to modern poster design he has been accredited the father of modern poster design.

The lucrative nature of poster art during that period attracted the interest of many prolific painters. Henri de Toulouse-Lautrec was another French poster artist of the 19th century who made changes in both the content and the artistic style of posters. He abandoned the lyrical impressionism of earlier styles by leaving large areas of flat colour in his posters, a technique he borrowed from Japanese prints. In his work, the text of the poster steadily decreased in prominence as he concentrated all attention on the picture. One of Toulouse-Lautrec's last works, *Jane Avril* (1899), eliminates the text entirely (except for the name of the entertainer herself); it is the prototype for all modern, purely pictorial posters (Microsoft Encarta Encyclopedia, 2009).

It is believed that Henri de Toulouse-Lautrec introduced dynamism in poster design by creating attractive pictorial theatrical and commercial posters with varying tones of flat and vibrant colour schemes that were accompanied with few texts to amplify the illustration. The production of classic outdoor posters by Cheret and Henri de Toulouse-Lautrec attracted many artists in Europe and America and this led to proliferation of outdoor posters and signs across Europe and America.

Many authors and organisations have shared their opinions on how different types of manual signage are produced. Fulcher, Tickle, Rhodes & Steward, (1998) and Goodier,



(1990) state different kinds of tools, materials and processes used to prepare grounds of wood, metals, cement walls, plastics and others and these are also buttressed Steward, (1998). The author reported that direct and indirect setting out and sheet stenciling, transferring, lettering and painting are the major techniques used to produce manual signs and these techniques were also confirmed by Gerofix Rent-A-Sign Ltd., (2012) and Global Outdoor Systems, (2012). It is obvious that most of these publications are accessible to Painting and Decorating and visual art students so they may be familiar with the techniques the authors have espoused.

After tracing the chronology of development of signage art in Europe, one would ask how did signage technology emerge in Ghana? According to Amenuke, Dogbe, Asare, Ayiku and Baffoe (1999), poster art is a form of contemporary African art introduced in the Gold Coast by the colonial administration in the 1920s. This presupposes that before the arrival of the Europeans in the Gold Coast signage art was not practiced as indigenous art. This assumption could be true because, there is no evidence which proves that people who leaved in this part of the world had developed writing systems which they could use to produce outdoor signs. Also, by 1920 the Gold Coast had been colonized by Britain so outdoor signs might have been introduced in this country by the colonial administration. This speculation of the researcher was confirmed by Advertising Association of Ghana (2016) who reported that during the colonial era the colonial administration imported metal signs bearing logos and names of state institutions and companies such as Ghana Armed Forces, the Police Force, PWD and others.

The Association further reported that local and British merchants also imported different kinds of metal signboards which were found in front of many warehouses and stores in trading centres in Cape Coast, Saltpond, Accra, Winneba, Axim, Nsawam and others, some of which are still in display. This historical account further confirms Amenuke et al (1999) claim that poster art was introduced in the Gold Coast by colonial administration. The research could therefore infer that through the creative prowess of the artisans who worked in those state institutions, some of them gradually imitated the shapes of the letters and the designs through continuous experimentation and eventually developed the skill of lettering and stenciling. Apart from experimentations of artisans in public services, other factors also contributed significantly to the development of signage technology in Ghana.

Edusei (2004) and Duku (2012) reported that, formal art education was introduced in the Gold Coast by the colonial administration in 1927 when they established art education department at Achimota School. Also, Painting and Decorating craft course was



introduced at Takoradi Technical institute in 1955 which was later upgraded to Takoradi Polytechnic in 1963 (Takoradi Polytechnic 4th congregation Brochure, 2005). The curriculum of the programme consisted of lettering and signwriting, drawing, designing, printmaking, colour theory and application, painting technology and others (City & Guilds of London Institute, 1986). Apart from the painting and decorating and visual art programmes in technical and secondary schools, art education department, industrial Arts department and college of art were established at Advanced Teacher Training Colleges (ATTC), Winneba and Kumasi and Kumasi College of Technology respectively (Edusei (2004). Graduates from these programmes applied their skills and knowledge in basic drawing, colour theory, painting, lettering and designing to produce simple notices and posters. These experimentations continued and gradually developed into a local craft called sign writing.

This local craft went through various stages of technological development until digital design and printing emerged in Ghana in the 1990s which changed the face of signage technology in Ghana. Being a contemporary local craft, it is imperative that the various developmental trends that characterized art in Ghana are researched into and documented. Anecdotal evidence shows that there is no comprehensive documentation of the development of signage art technology in Ghana and this has created a deficit of authentic documented local information on the art.

This study therefore was set out to use qualitative research approach and methodologies to conduct a historical research to investigate and examine various stages of technological developments that manual signage art in Ghana has evolved and document them for posterity. Specifically, the study focused on the following dimensions of the historicity- types of manual signage that have been practiced in Ghana and their processes of execution, tools, equipment and materials use to produce manual signage in Ghana and processes of installing manual signage in Ghana.

METHODOLOGY

2.0. Overview

The framework of the methodology consisted of the following research design, the study population, data collection instruments, data collection procedure and methods of data analysis.

2.1. Research Design

The researcher adopted a purely qualitative research approach for the study and this approach was informed by the nominalist ontological assumptions on social reality and

the constructivist epistemologists assumptions on the ontology of reality, knowledge or truth, and how truth or knowledge can be acquired and established. The nominalist school of thought argues that social reality has no external existence such that it can be objectively and dispassionately accessed; it is rather the result of human thinking, and the Constructivist epistemologists also hold the position that meaning is constructed not discovered so subjects construct their own meaning in different ways, even in relation to the same phenomenon (Gray 2004: Kusi, 2012).

These theoretical assumptions clearly situated the study in the domain of Interpretivism/Constructivism paradigm which was described by Blaikie (1993) as post-positivist philosophy since it contends that there is a fundamental difference between the subject matters of natural and social sciences. The interpretivists claim that in the social world it is argued that individuals and groups make sense of situations based upon their individual experience, memories and expectations. Meaning therefore is constructed and (over time) constantly re-constructed through experience resulting in many differing interpretations. The researcher therefore situated the study within this paradigm due to the historical nature of the study and the means by which the data was gathered, analysed and discussed.

2.2. Population of the Study

The target population of the study consisted of all traditional signwriting shops, large-scale outdoor advertising agencies and advertising regulating agencies in Ghana and their staff. However, due to the large number of such organizations, the study was concentrated in Accra metropolis where majority of them are located. To enable the researcher obtain reasonably accessible number of the agencies that would facilitate data collection, the researcher categorized the advertising agencies into traditional sign writing shops and large-scale outdoor advertising agencies and purposively selected some from each category to constitute the case study. This reduced the target population to a reasonable number that could be easily be accessed. The following criteria was used to select the shops and the agencies-The longevity of operation in the local industry, the scope of operations of the agency and the reputation of the agency. The researcher also purposively selected Advertising Association of Ghana from the outdoor advertising regulatory agencies because it is the largest regulatory agency in Ghana at the moment. To obtain actual respondents for the study, the researcher purposively selected a number of relevant staff from each category of the study outdoor advertising businesses and the executive secretary of Advertising Association of Ghana and used them for the study. The following criteria were used to select the respondents: years of working experience, area of specialization in the industry, job schedule and position the person occupies in his/her

shop or agency. The purposive sampling was used because it allows a research to base on expert advice and his personal knowledge and familiarity in the study area to select respondents that would help him to achieve the purpose of the study (Adentwi&Amartei, 2009). The tables below indicate how the selected traditional sign writing shops, large-scale outdoor advertising agencies, advertising regulatory agencies and the sample population were distributed for the study:

Table 1: Signage production businesses and advertising regulatory agencies that constituted the case study

Category of business	Name of business	Location
<i>Traditional Signwriting shops</i>	ChrisArt and Screen printing Services	Abosiokan
	A-&Chate Art	Odokor
	DDP Outdoor limited	Tesano
<i>Large-scale Outdoor advertising agencies</i>	Global Outdoor Systems	Airport Residential area
	Impact advertising	Nyaniba estates
	Apple pie publicity	
	Advertising Association of Ghana	Asylum Down
<i>Advertising regulatory agency</i>		

Table 2: Outdoor Advertising Professionals and Regulators Used for the Study

Outdoor Advertising Professionals	Number interviewed
Graphic Designers	4
Sign making technicians	6
Owners/Managers of large-scale outdoor advertising companies	4
Owners of traditional signwriting shops	2
Executive Secretary of AAG	1
Total number of professionals visited	17

2.3. Data Collection Instruments

Unstructured interview schedules, unstructured observation guide and documentary study were used to gather relevant primary and secondary data for the study. The unstructured interview schedule was used to gather data from all the respondents. This method was adopted because, the nature of the study required detailed information about the historical development of the art in Ghana and different aspects of manual

signage production technologies that have evolved in the local industry over a long period and since some of these information might not have been documented, the researcher thought it would be appropriate to use casual and informal conversational style to interview the practitioners in their working environment during the observation periods with pre-conceived focused questions based on the objectives of the study. This enabled the researcher to probe further into the responses of the respondents (Creswell, 2008) cited in Kusi, (2012). The unstructured observation guide was also used to study the activities of the practitioners in their workshops. The researcher also retrieved archival and other documented information from the respondents and the study organizations during the field study.

2.4. Data Collection Procedure

The researcher collected both primary and secondary data for the study. However, majority of the data collected were primary due to the nature of the research topic and the objectives of the study. The researcher was permitted into the premises of all the sampled shops and companies in the Accra metropolis. In all the shops and companies, the management assigned one front office staff to lead the researcher to the various sections and introduced him to the technical staff. The researcher therefore visited every relevant unit or section in each shop and company that could be accessed during the field study to observe their operations, tools, equipment, materials and designs, interviewed them and took photographs (Denscombe M., 2008). The researcher also engaged some of the technical staff in casual conversation through unstructured interviews on their schedules and other issues concerning their companies and recorded on audio tape and mobile phone. However, the researcher wrote down the responses of the interviewees who did not allow him to record their voice electronically and took some notes during the observation periods.

2.5. Method of data Analysis

Narrative, descriptive and document analysis were used to analysis the data and discuss the findings of the study (Bogdan & Biklen, 2007). The narrative analysis method was used because the researcher recounted some of the responses given by the respondents during the interview sessions. The descriptive analysis method was also used because some of the activities and processes he observed on the field required vivid description. This helped him to paint a true picture of the modus operandi of the traditional sign writing shops and the large-scale outdoor advertising agencies in how they execute manual signage. Finally, the researcher used the document analysis method because certain relevant archival information retrieved from the study organizations had to be

assessed and sift out facts that could be used to complement the information needed to construct the history.

2.6. Data analysis Procedure

Different kinds of data gathered from the recorded interviews and the field notes were manually transcribed, coded and classified into major and subordinate themes to base on the objectives of the study. The edited photographs were sifted, placed under the appropriate themes, interpreted and analyzed qualitatively to reflect the objectives of the study.

DATA PRESENTATION AND ANALYSIS

3.0. Overview

In order to reduce the volume of the data obtained from the processed data, transcriptions of respondents that were similar and consistent were merged, presented and analyzed. However, distinct information given by specific respondents was highlighted. The data was presented and analysed based of the following major themes:

- ❖ Development of manual signage technology in Ghana from 1920s-1980s
- ❖ Development of manual signage technology in Ghana from 1980s to 2016

3.1. Developments of manual signage technology in Ghana from 1920s-1980s

The responses of the two seasoned signwriters revealed that during their apprenticeship days in Accra in the early 1970s, their masters and all other signwriters in Accra produced human portraits, banners, signposts, signboards, billboards, mural signs, vehicle branding, paper posters and others for commercial stores, theatre houses, schools, companies, hotels, churches and others. One of them recounted that, the signwriters used nails, lumber, plywood, battens and different sizes of red wood poles to construct their signboards and billboards and the signs were constructed by hired carpenters.

With regards to how they prepared the wooden signs, it came out that they used manual tools and processes and simple equipment and materials to prepare their grounds. They used medium grade sand paper to abrade the surface of the signboard to obtain a smooth and leveled surface and dusted off. A coat of emulsion paint was applied as primer and upon drying filled all indentations with polyfiller, allowed it to dry, cut off with fine grade abrasive paper and applied two coats of enamel paint as an undercoat and finishing coat respectively.

With respect to how they prepared grounds for mural signs, majority of them said, “they scraped off all mortar splashes or flaking paint films from the surface and used smooth sand paper to abrade the surface and dusted off. After that the ground was primed with a coat of emulsion paint, indentations filled and upon drying, cut off to obtain a smooth and leveled ground. Two coats of enamel paint were applied as finishing coats”. In respect of how grounds were prepared for vehicle branding in those days, they recounted that they used a rag to wipe off dust from the surface since the cars were already sprayed with colour.

With the question of how copies were set out on the grounds, all of them emphasized that two major methods were used: ‘direct setting out’ and ‘indirect setting out’. They however indicated that, indirect setting out was mostly used for large pictorial signboards, billboards and mural signs while direct setting out was used for small signboards and signposts. With the direct setting out method, they used chalk to plan the layout on the ground with thumbnail sketches and used manual lettering tools and processes to set out the actual copy. Sometimes portraits were scaled direct on the ground. They filled-in the letters and the painted illustrations with sable brushes and enamel paint thinned with turpentine. The letters were given two coats to obtain adequate coverage.

They recounted that they did the indirect setting out by manually by setting out the copy on a bond sheet or brown paper of the same size as the sign to obtain a ‘cartoon’. After setting out, the cartoon was transferred onto the ground by chalking or pouncing, filled-in the text and painted the illustrations. They pointed out that, before the cartoon was transferred onto the ground of a billboard, the plywood units were arranged orderly on a leveled ground to butt, braced at the back and labeled the individual sheets. The size of the plywood ranged from $\frac{1}{4}$ to $\frac{1}{2}$ inches. Apart from direct and indirect setting outs, the respondents also said that “few sign writers in Accra used sheet stencil to produce small signs along-side lettering and painting”.

Responding to how they executed works above head height, they recounted that, all the sign writers used ladder, trestles, and scaffolds to gain access to lofty places when producing mural signs and mounting large signboards and billboards on lofty buildings. With the question of how they installed billboards, they recounted that carpenters were hired to assist in the installation. The uprights (poles/stands) which could be two, three, four or more depending on the height and width of the billboard were cut from two inches by six inches red wood to the required height and fixed them into the earth in a deep pit cast in concrete which was reinforced with wire mesh and concrete and left it for

some weeks to cure. The poles were spaced at equal intervals. After that the framework that carried the sheets were constructed against the uprights with two inches by four inches red wood and big nails. Two inches by two inches red wood were also used to construct the vertical braces and the sheets were nailed orderly to the braces to butt according to their labels. The back of the erected billboard was reinforced with a number of vertical and horizontal two inches by two inches wooden braces and inclined poles were fixed into the earth so as to strengthen the sign and improve its stability against storm. Most of the respondents recounted that majority of the outdoor advertising companies treated the plywood and the wood they used to construct billboards with wood preservatives before construction. The analysis also revealed that they installed small signboards at shop fronts by nailing them against facial boards and supported the larger ones with diagonal braces against the roof.

On the question of how banners were produced in those days, the respondents recounted that they used manual signwriting tools, materials and processes to execute their banners. For example, they used calico or polyester as supports and emulsion paint as medium and used two major methods to produce their banners: direct setting out and painting and sheet stenciling. To execute the banner, they narrated that the full length of the fabric was stretched on a wall or long plywood and pinned onto the surface; the copy was blocked-in, set out and painted direct on the fabric with bristle brushes and emulsion paint. The respondents also said that, "they produced multiple banners of the same size and copy by laying two or three of the fabrics on top of each other and stretching them together before doing the setting out on the top one and the copy painted. After painting, the colour soaked into the underlay fabrics to register the copy at their right positions and painted when the top banner was removed".

With respect to how sheet stencil was used to produce banners, they recounted that, after planning the layout, they set out the text on strips of manila sheet to conform to the font sizes on the layout and cut into stencils. The cutting was done with a sharp stencil knife on smooth glass sheet or plywood. Bridges/ties were left to hold hollowed counters in position before cutting. The illustrations were also cut into stencil. For flat polychromatic illustrations, they used tracing paper to separate the colours and transferred onto different manila cards before cutting them individually to obtain multi-plate stencils.

The respondents also emphasized that, when stencil was to be used for mass reproduction, they preserved the sheet by applying two coats of vanish, lacquer or polish onto the sheet, and allowed it to dry thoroughly before cutting. After stencil preparation,

they stretched and secured the fabric onto smooth plywood and arranged the stencil sheets on it to balance. After that the stencils were carefully dubbed with a stencil brush or a piece of foam and emulsion paint and ties filled-in with paint and sable brush to complete the banner.

With the question of how banners were installed in those days, they narrated that, the two ends of the banner were folded over and sewed to create sacks where wooden rods were inserted and long ropes tied at both ends of the rods. Most of the banners were hanged across commercial streets in Accra by tying the ropes to electric poles, facial boards or roof rafters. Below are pictures of some the tools, equipment, processes and works that characterised signwriting activities in Ghana between 1920s and 1980s:

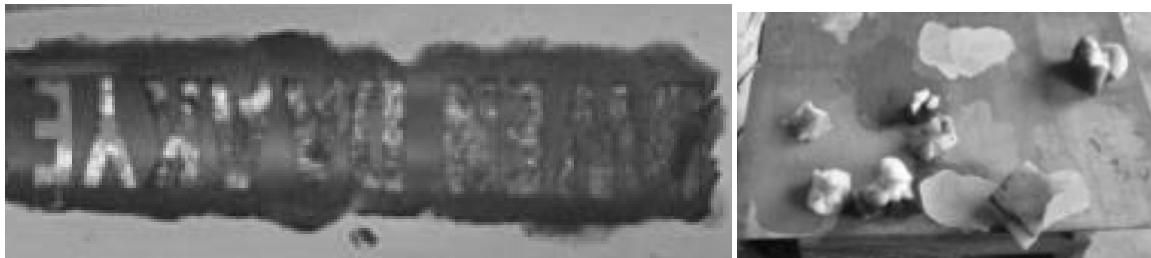


Figure 1: Some manual signwriting tools

Paper stencil (A) Palette with charged foam (B)

Source: A & Chate Art, Accra. Field work, 2016



Figure 2: Samples of old manual signage

Direct setting out: manual banner (A) Direct setting out: vehicle branding (B)

Source: ChrisArt and screen printing services, Accra. Field work, 2016



Figure 3: Samples of old manual signage continued

Wooden billboard (C)

Wooden signboard (D)

Source: ChrisArt and screen printing services, Accra. Field work, 2016



Figure 4: Samples of old paintings and signboards continued.

Old manual Painting (A) Old manual wooden painting (B)

Source: Chris Art, Accra, Field work, 2016

3.2. Development of manual signage technology in Ghana from 1980s to 2016

In order to gather credible primary data from the local practitioners, the researcher relied on the two seasoned sign writers and other sign makers in some of the large-scale outdoor advertising agencies. The findings of the transcribed data were presented in the following sequence:

3.2.1 Painted metal signs

The responses of the two seasoned sign writers indicated that, apart from painted wooden signs, mural signs and manual banners that dominated the local outdoor advertising industry until the 1970s, manually painted metal signs also emerged in the

local industry in the early 1980s which were produced along-side wooden signs. The metal signs were largely used for billboards, sign boards and sign posts.

In respect of how they produced the metal signs, the responses indicated that they used the same setting out, transferring and painting processes as how they produced manual wooden and wall signs. However, the method of construction and ground preparation were different. They recounted that, most often, their masters used new galvanized sheets, different sizes of angle bars and still bars to construct the signs and the signs were constructed by hired welders. They said that "the angle bars were used to frame the metal plate and the still bars were used to construct the poles". They however stressed that larger sizes of angle bars and still bars were used for large signboards and billboards. The respondents also pointed out that because of the durability of metals in comparison to wood, most clients preferred metal signs to wooden signs especially for billboards.

With the question of how they prepared the ground to receive the copy, they recounted that they washed the surface of the metals with white spirit to degrease it. After degreasing, they wet abraded the surface with fine grade emery cloth and white spirit to provide a key for adhesion of paint, wiped off with clean rag and primed immediately with red lead primer or zinc rich primer. After priming, they applied undercoat and a coat of enamel paint as finishing coat. The pictures below are samples of painted metal signs, wooden signs and manually produced banners:



Figure 5: Examples of manual signage produced in Ghana in the 1970s

Painted Metal Sign (A) Painted Wooden Signs (B)

Source: Fieldwork, 2016



Figure 6: Examples of manual banners produced in Ghana in the 1970s

Manual banner (A) Manual banner (B)

Source: Fieldwork, 2016

3.2.2. Perspex signs

The responses of the seasoned sign writers proved that other forms of outdoor signs called Perspex signs emerged in the local industry in the late 1980s. They were mostly used for small commercial and institutional signs. With respect to how they were produced, the interviewees recounted that, the surface of the Perspex was washed with soapy water and rinsed with clean water to remove grease and dust contamination. Upon drying, the copy was executed on the Perspex either by signwriting or stenciling. They also said that, another technology emerged where jigsaws were used to cut Perspex into letter templates and fixed them onto the Perspex with a strong liquidized adhesive called 'chromophone'.

3.2.3. Neon signs

The respondents also said that "the emergence of Perspex signs ushered in another type of signage called neon signs in the local industry in the 1980s". They recounted that when they produced the Perspex sign they fixed it into aluminum case and connected fluorescent lights into it and connected them to one switch. The lights were switched on at night to illuminate the sign. They said that, "the neon signs were installed on walls, roofs or on uprights at road sides. They also reported that the illuminated signs were mostly produced for entertainment centres, institutions and commercial shops.

3.2.4. Metal sticker signs

The responses of the seasoned sign writers also revealed that apart from neon signs, another type of signage technology called sticker signs emerged in the local industry in the 1980s. They said that instead of using paint to write the text on the Perspex or metal support or cutting letter templates from Perspex sheets and fixing them on Perspex supports, sticker sheets were used to cut letter templates and fixed them unto metal or Perspex sheets. The responses revealed that, two types of coloured opaque sticker

sheets were used (scotch sticker which was reflective at night and ordinary sticker which was non-reflective at night) and both of them were available in variety of colours.

In respect of how they executed the sticker signs, they narrated that when the layout was completed the text was manually set out at the back of the sticker sheet in reverse (mirrored) and cut out in templates with sharp stencil knife, razor blade or scissor. The heights of the letters were measured on the surface of the Perspex sheet and lines ruled on them. Soapy water (Omo solution) was applied unto the board, the backing sheets of the templates were removed from the letters and the letters were pasted gradually at their correct positions on the sheet to form the copy by applying good principles of optical spacing.

The respondents also said that “before the cut sticker letters were pasted on the ground, the background of the metal or Perspex supports were thoroughly degreased, wiped off and allowed to dry. The substrates were further dusted off to remove all traces of dust and bits, and then a large sticker sheet was pasted onto them to cover the entire background. The colour of the background sticker was always contrasting to the colour of the text templates. After pasting the text templates on the background sticker, other parts of the signboard were prepared and finished in enamel paint. The responses also revealed that apart from metal sticker signs, most sign writers used stickers to brand vehicles and this kind of branding were done on institutional and organizational vehicles. Below are pictures of some Perspex, neon and sticker signs produced in Ghana from 1980 to 2016.



Figure 7: Types of neon and sticker signs produced in Ghana from 1980s to 2016

Neon sign (A) Sticker sign (B)

Source: fieldwork, 2016.



Figure 8: Sample of Perspex sign produced in Ghana from 1980s to 2016

Perspex sign

Source: fieldwork, 2016.

The observations and field notes taken by the researcher during the attachments proved that all the accounts given by the practitioners were correct because, all the technology they described are still used in Ghana. In fact, the researcher observed them as they execute most of the signs at their shops. This helped him to triangulate the facts from the narratives with the facts from the personal observations.

4.0. DISCUSSION OF FINDINGS

It emerged from the analysis that signage might have been introduced in the Gold Coast in the 19th century by the colonial administration and merchants. This revelation have also been hinted by Advertising Association of Ghana (2012) who reported that during the colonial era the colonial administration imported metal signs to identify state institutions and companies and local and British merchants also imported different kinds of metal signboards from Europe and installed them in front of their stores and warehouses in most commercial towns across the Gold Coast. Also the fact that signage used in the Gold Coast were imported from Europe further confirm Amenuke et al, (1999) position that poster art was not an indigenous art but exotic art which was introduced in the Gold Coast through colonization and formal education.

The analysis also revealed that the craft of signage art might have emerged in the Gold Coast in the 1930s after the importation of signage from Europe into the Gold Coast and this was made possible through curiosity and continuous imitations of the letters and illustrations in the signs by local artisans who were employed in the public and civil services and the force works. These experimentations gradually developed into a local craft called sign writing in the 1930s. It was also found out that the introduction of art

education and industrial art programmes at Achimota College, Advanced teachers Training Colleges and Kumasi College of Technology might facilitated the rapid development of signage art technology in the Gold Coast. These findings could be justified because Edusei (2004) and Duku (2012) reported that the curricula of these programmes equipped the graduates with knowledge and skills in basic drawing, colour theory, painting, lettering and designing which they might have applied to produce posters and signage for businesses and organisations.

The analysis also revealed that between 1920s and 1960s, wooden signs, wall signs, fabric banners, vehicle branding and paper posters characterised local signage technology in Ghana. Manual tools and material such as pencils, sable brushes, flat wall brushes, sand paper and emery cloth, enamel and emulsion paints and manual processes such as lettering, drawing, transferring, painting and stenciling were used to produce signage. These processes have been confirmed by Steward, (1998) who reported that direct and indirect setting out and sheet stenciling, transferring, lettering and painting are the major techniques used to produce manual signs and these techniques are also buttressed by Gerofix Rent-A-Sign Ltd., (2012) and Global Outdoor Systems, (2012).

It also emerged from the analysis that the local sign writers used various technical processes such as rubbing down, dusting off, priming, filling-in, undercoating, finishing, degreasing and others to prepare the substrates of the signs which secured the durability of the outdoor signs. These processes have also been prescribed by Fulcher, Tickle, Rholes & Steward, (1998) and Goodier, (1990). The confirmation of the processes by these author further prove that painting and decorating graduates from technical institutes and polytechnics played significant role in the development of signage technology in Ghana because according to Takoradi Polytechnic 4th congregation Brochure, (2005) and City & Guilds of London Institute, (1986). The curriculum of the programme included of painting technology.

It emerged from the analysis that between 1920s and 1970s, all billboards produced in Ghana were wood and they were constructed with ¼ or ½ inches plywood and 2 inches by 4 inches red wood poles. The number of plywood, poles and braces used for the billboards depended on the size of the signage and most of them were chemically treated to improve durability. Fulcher, Tickle, Rholes & Steward, (1998) have provided comprehensive information on wood preservation chemicals and processes. It was also found out from the visual analysis of the types of pictorial signage produced in the Gold Coast and Ghana between 1920s and 1980 that majority of images were rendered realistically in black and white. This could mean that there were no coloured photographs

in those days since the sign writers imitated the tones in the images to paint a complete replica of the photographs.

Again, the analysis also revealed that the outdoor advertising agencies used wooden scaffolds, ladders and trestles to install signs on lofty buildings. The application of scaffold and wood preservation technologies in signage construction and installation in the Gold Coast and Ghana respectively, further confirm that painters and decorators and professional carpenters played a role in the construction of outdoor signs in those days.

Since large wooden billboards were produced for companies, it is possible that the outdoor advertising agencies might have conveyed the signs to different sites across the country by trucks and also had a team of workers responsible for construction and installation of signage. The researcher could also deduce from the analysis that installation of signs was not very complex in those days since simple materials and technology were used. The researcher can also infer that the manual wooden signage technology that emerged in the Gold Coast in the 1930s might have been an obsolete technology in Europe because according to Gallery.sjsu.edu, (2016) by 1867 Jules Cheret had used lithographic printing to produce coloured pictorial outdoor posters in Europe.

The conclusion of the researcher can further be affirmed by the fact that, according to AAG (2012), when the colonial administration stated importing signage into the Gold Coast in the 19th century, they imported metal signs not wooden signs. This clearly proves that signage art was imported from Europe into the Gold Coast by the colonial administration as reported by Amenuke, et al, (1999) and that as local craftsmen and visual arts and painting and decorating students and graduates were struggling to acquire the skill of sign writing, signage technology had developed beyond manual lettering, painting and sheet stenciling to lithographic reproduction. This indicate that even though The Gold Coast was part of the commonwealth, it lack behind in signage technology for almost a century.

The analysis also revealed to the researcher that, metal signs started emerging in Ghana in the 1980s and due to their durability, they gradually overtook wooden billboards. It also emerged from the analysis that galvanized sheets and iron bars were the predominant metals used for metal signs. Even though the paint system for metal signs could breakdown due to corrosion and fading, they could not rot compared to wooden signs. Perhaps, it was this quality of metals that encouraged sign writers and the public to prefer metal billboards to wooden billboards.



Another reason that might have accounted for the durability of metal signs in those days could be the quality of ground preparation, materials and processes the sign writers employed to execute metal signs. This might have been possible because, most of the sign writers who worked in local large-scale outdoor advertising agencies might have been painters and decorators. This claim of quality ground preparation of the metal substrates was supported by Fulcher et al, (1998). On the other hand, metal signs might have been expensive than wooden signs due to the high cost of metal in Ghana compared to wood.

Analysis of the transcriptions revealed to the researcher that Perspex signs emerged in the local industry after wooden and metal signs had dominated the industry for some time. Even though Perspex was used for small commercial signs, such signs appeared classic compared to painted signs. This could be attributed to the three-dimensional nature of the letters and images that constituted the copy. The researcher also found out from the analysis that, due to the plastic nature of Perspex, such signs would be more durable than painted wooden and metal signs. However, they could be expensive than wooden and metal signs because of the cost of Perspex and special skills required in their production.

Again, the researcher induced from the analysis that sticker signs produced on Perspex sheets and neon signs were mostly patronized by state and private institutions because they looked prestigious and executive than wooden and metal signs. It also indicated that sticker templates were easier to cut than Perspex due to the paper-like nature of the sticker and also the reflective nature of some of them might have made them more attractive to clients.

The researcher also found out from the analysis that even though Perspex signs are still in the system, they are mostly used by fuel stations across the country. The researcher could also induce from the analysis that despite the high patronage of neon signs by state and private institutions at higher cost, the technology might have been monopolized by the large-scale outdoor advertising shops in Accra due to the nature of the technology. It is also obvious from the discussion that neon signs were not produced as billboards because it was difficult and inefficient to paint pictorial images on Perspex, however, most billboards were pictorial than textual.

The researcher can conclude from the analysis that the manual methods used to render copies on signs in those days were slow, cumbersome and could be inaccurate and this could have affected the output of the practitioners as well as the quantity and quantity of

the signs. Again, even though painted wooden and metal signs, manual sticker metal signs, neon signs and Perspex signs are still produced in the local industry, their patronage continue to dwindle due to the emergence of computer generated and digital large format printing signs.

5.0. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Overview

After a thorough discussion of the major findings that emerged from the data analysis, the researcher summarized the major findings, made conclusions and recommendations that could be adapted to improve the culture of documenting the trends of contemporary artistic cultures and also improve the practice of signage art production in the current competitive contemporary scientific and technological society.

5.1. Summary of Findings

1. Signage was introduced in the Gold Coast by the colonial administration and merchants before 19th century through the importation of metal signs and door labels from Europe to identify state owned institutions and organisations and also to advertise commercial stores and advertise goods and services.
2. Local artisans, visual art and painting and decorating students and graduates from public services, force works, secondary schools, technical institutes and colleges imitated the signs through curiosity and finally developed into a local craft called signwriting' in the 1930s.
3. The introduction of formal art education at Achimota School in 1927, Painting and decorating craft causes at Takoradi Technical institute in 1955, the establishment of the college of art at KNUST, Kumasi and the art education department of ATTC, Winneba contributed significantly to the rapid development of signage technology in the Cold Coast and Ghana.
4. From 1920s to 2070s, manual signwriting tools and materials such as pencils, sable brushes, flat wall brushes, abrasive papers, chalk line, metric ruler, a pair of compass, brown paper, masking tape, tracing paper, chalk, stencil brushes, foam, etc. and processes such as lettering, transferring, paper stenciling and painting and manual wooden signs, manual painted fabric banners, and manual mural signs dominated signage technology in the Gold Coast and Ghana.
5. Painted metal signs emerged in Ghana in the later part of 1970 and manual Perspex, Neon and Sticker signs emerged in Ghana in the 1980s.
6. The emergence of computer graphics and electronic printing in Ghana in the 1990s and subsequent introduction of large format digital printing in 2000



unfolded large format outdoor signage technology in Ghana which has dominated the craft in Ghana till date.

7. Even though manual signage technology is still practiced in Ghana alongside digital signage technology, patronage of manual signage continue to reduce drastically in the local industry.

5.2. Conclusions

Based on the summary of findings that emerged from the discussion, the researcher will concluded that signage technology was not practiced as indigenous art in Ghana before the British colonized the Gold Coast. The art was introduced in the Gold Coast by British because, by the 19th century Gold Coast had been colonized by Great Britain, and since signage technology was practiced in Europe, they took advantage and imported some into the country to identify public institutions and organisations. It could also be inferred that in the later part of the 19th century, local merchandising and trans-continental trade were booming in the Gold Coast and this might have created a competition in merchandising in the Gold Coast which therefore compelled the merchants to import commercial signs from Europe to advertise their businesses, stores and warehouse in commercial towns across the country.

Again, the researcher also concluded that it was curiosity and pragmatism that inspired local craftsmen and visual art and painting and decorating graduates from secondary schools, technical institutes and colleges respectively to imitate the letters and logos of the imported signage to develop the art of sign writing in the 1930s. Also, manual wooden and mural signage, fabric banners and vehicle branding and manual tools and execution processes dominated local signage technology from 1930s to 1970 because, wood was abundant and cheap in the Gold Coast. Also, polyester and Graybaft were also abundant and cheap whiles walls of companies were easily accessible. It could also be concluded that metal signs, sticker signs and Perspex signs emerged in Ghana in the 1980s due to the limitations of painted wooden and painted metal signs so there was the need to explore alternate methods that could enhance the quality of signage production in the Gold Coast and also bring variety in signage art in the local industry.

It could also be concluded that, Perhaps, it was due to cultural initial and lack of proactivity among the local practitioners that made manual signage technology dominate local signage technology for seventy years in Ghana. However, the emergence of computer graphic design and digital printing in Ghana in the 1990s might have occurred due to the emergence of the information age and digital revolution that took place in America and Europe and subsequent introduction of ICT and computer graphics in our



education curricula in the early 1990s. Also, digital signage were most patronized in Ghana as at 2016 due to the quality of finishing, rapidity of production and the quality of images produced by the digital technology. It is therefore conclusive that even though manual signage technology was being practiced concurrently with digital signage, digital signage technology had overwhelmed manual signage technology and this trend can render manual signage technology obsolete in Ghana in the years ahead.

5.3. Recommendations

Based on the summary of findings, and conclusions made, the researcher made the following recommendations for adaptation and implementation:

1. Communication design faculties and departments in our tertiary institutions and graduate and undergraduate students must be encouraged and empowered to conduct regular research into the developmental trends of various aspects of communication design to enable them monitor, document and preserve the craft of outdoor advertising in Ghana.
2. Findings of such research works must be adopted and integrated into communication design curricula at all levels of our educational system. Such findings must also be documented and kept at public and institutional libraries for easy access by students and researchers.
3. NBSSI and graphic design departments in our tertiary institutions must identify lay sign writers in various towns, districts and regions across the country and organize periodic computer graphic design and digital printing training workshops for them.
4. Local outdoor advertising practitioners who lack knowledge and skills in ICT and contemporary computer graphic design must be proactive and learn the skills and adopt them into their operations to make them competitive in the contemporary industry.
5. Finally, the findings of this research must be adopted into communication design curricula at all levels of our educational system.

SUGGESTION FOR FUTURE RESEARCH

The researcher acknowledges the fact that there are many dimensions of manual signage art in Ghana this study could not cover, and would therefore suggest that other researchers can research into such areas and document them for posterity.

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