



## The impact of printing technology on advertising and consumer behavior

Menna A. Alkaramani <sup>a</sup>, Iman G. Elbadwy <sup>a</sup>, Zainab A. Awad <sup>a</sup>, Mariam A. Eida <sup>a</sup>,  
Hasnaa S. Hendawy <sup>a</sup>, and Ahmed G. Hassabo <sup>b\*</sup>

<sup>a</sup> Benha University, Faculty of Applied Arts, Advertising, Printing and Publishing Department, Benha, Egypt

<sup>b</sup> National Research Centre (Scopus affiliation ID 60014618), Textile Research and Technology Institute, Pre-treatment, and Finishing of Cellulose-based Textiles Department, 33 El-Behouth St. (former El-Tahrir str.), Dokki, P.O 12622, Giza, Egypt

### Abstract

The printing industry and printing machine advancements have shaped human civilization and helped spread several sciences. This industry has affected human politics, economics, and culture. Printing technologies and advertising have raised public awareness of food products, services, and other topics and motivated consumers to buy them. From 1942 to 1952, Iranian ads featured consumer goods and daily life, alluding to the prior regime's economic policies. After the June 6, 1942, popular uprising, the government focused on propaganda and communication networks, founding the Ministry of Intelligence later that year. Advertising organizations formed the Union of Advertising Organizers to improve working conditions, promote class solidarity, and protect worker rights. Imaging and advertising have discovered the print industry's ability to shape and exhibit propaganda and illustration work, as well as its influence on 1380s Iranian advertisements. Although Iran introduced printing equipment and the printing industry late, several printing firms produced books, journals, and newspapers. The introduction of brochures, catalogs, posters, banners, and product packaging produced in big quantities and high quality by offset printing machines changed advertising. After the war, society and social attention were focused on it and its aftermath to close the gap with the international community and solve the nation's damage. In the 1980s, Iranian society needed election-related information, advertising-related information, and post-war opportunities for scholars and authors. War destroyed cities, thus the nation had to rebuild. In recent years, marketing gurus and the general public have focused more on interpersonal appeal, particularly physical appearance. When considering whether a model's physical appearance in advertising impacts customer decision-making, marketers should examine factors such as: (1) Optimal degree of beauty.

**Keywords:** modern printing techniques; attractiveness; advertisements; advertising

### Introduction

Without a question, the printing business and the advancement of printing machines have had a significant impact on human civilization, helped to preserve many sciences, and spread globally. [1]

The economics, politics, and cultural development of human societies have all been impacted by this industry. It is evident that print advertising has had a significant influence on educating people about food goods, services, etc. and on persuading them to purchase a particular product due to the advancements in printing technology. In politics, it is possible to sway public opinion in favor of a certain candidate and garner the necessary number of votes for the election by presenting candidates and

putting up posters and banners around cities. [1-5] The main goal is to contrast offset print and the print industry with

Rapid advancements in technology have a wide range of effects on how people behave. Human behavior is a very sensitive and dynamic trait that is influenced by a variety of events. Contemporary advertising tactics and tools have shaped advertisers and profoundly affect consumer purchasing decisions. Companies are making quick adjustments to their product offerings in an effort to reach as many customers as possible in a limited amount of time. Rich information and a wide range of products and services have given the customer flexibility to choose what he wants. However, the purchase issue also gets more prevalent as the range of offerings

\* Corresponding author: Ahmed G. Hassabo, E-mail: [aga.hassabo@hotmail.com](mailto:aga.hassabo@hotmail.com), Tel. 00201102255513

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risers. In these situations, the buyer looks for pertinent information from several sources. Advertising is the media that lessens cognitive dissonance, assisting consumers in making decisions.

The purpose of this study is to investigate contemporary advertising techniques, advertiser tactics, and their impact on consumer purchasing behavior. The study's framework allows for the exploration of a number of topics, including societal, technological, and personal ones. Advertising and consumers will be able to make better decisions if these factors are identified. [5]

the start of modern advertising, 1946 AD saw the start of modern advertising, which peaked in 1956 AD. Large advertising agencies were formed in the next two decades, the 1961s and 1971s, marking the zenith of commercial advertising. [6]

In the United States, advertising flourished in the 1940s and 1950s. Owing to the expansion of Iran's international trade and the country's importation of goods from other countries, partnership businesses gradually evolved into advertising agencies. [6]

Iran saw a boom in advertising throughout this decade as a result of the nation's high affluence and industrial and economic advancements. Iran was designated as the International Atomic Energy Agency's (IAA) Middle East Center. [7] This approach persisted until 1975, when Iran assumed leadership of the World Propaganda Agency. The victory of the Islamic Revolution in 1978–1980 resulted in a nationwide upsurge in revolutionary spirit. In terms of the revolution's original slogans, a type of needlessness and disrespect for material goods had emerged among the populace. Because consumer products invested by foreign firms constituted the majority of Iran's economy, most consumer goods could not be manufactured domestically and had to be imported from abroad due to existing conditions. Additionally, Subsequently, as the enforced conflict progressed, the domestic media's primary focus shifted to covering news on the war and its implications for national security, with propaganda inevitably supporting the conflict at that time. However, due of the social climate that was formed during the war, news and documentary photography flourished, while other vocations related to photography stagnated for a number of years. Despite the limited facilities, advertising color images from this decade were reproduced in any condition and used in advertising designs.

After the war, the nation established new factories and saw the resurgence of existing manufacturers and workshops, increasing productivity and becoming self-sufficient in certain areas. Propaganda became necessary as a result for the prosperity of the nation. Advertising centers prospered once again as a result of the manufacturing boom and the increased need for advertising, and the industry saw

a forward trend. [8] Black and white printing was still used for advertisements during that time. The city employed colorful banners for advertising in the late 1980s. & He used them on buses, grabbing the interest of many onlookers and business owners. Newspapers in full color first appeared in the 1970s. For businesses who relied on the press as their main advertising medium, this represented a huge advancement in the industry. As a result, starting in 1993, the Ministry of Guidance's Deputy Minister of Press and Propaganda has included organizing the activities of advertising and propaganda centers in accordance with its legal obligations on the agenda. It manifested in a more serious manner than before.

Nearly every advertisement in the four newspapers published in the 1990s—Kayhan, Hamshahri, Etelaat, and Iran—was printed in color. In the interim, Hamshahri attracted a lot of attention because of a novel kind of page arrangement. Large-scale print advertising began to proliferate over the city in the 1990s on posters and banners. [9]

### **Advertising in the 2001s and Forms of Print Advertising**

The eighties' visuals are those of the media and communication era. Since graphic design has been reliant on the media and communication landscape in this decade, it has been able to adapt and change along with cultures and all associated aspects. [10]

The decade-long surge in advertising and the introduction of sophisticated printing presses to Iran signified a significant advancement in the advertising industry. In fact, some believe that this decade has had a visual influence on advertising. This decade's development was such that, in Tehran's first two years, roughly 900 advertising agencies employed people. However, despite the advancements made and following the recovery from the post-revolutionary advertising depression, press advertising, aside from a small handful, more imaginative and Early in the 1380s, clever strategic methods for election advertising were used; it can also be inferred that new graphic design and advertisement tactics would be crucial to the outcome of the election. The advertising strategies used in the ninth and tenth presidential elections were altered in the middle of the 1380s. Environmental advertising, billboards, and poster design all had remarkable peaks during this time. In order to draw in hitherto unheard-of rivalry, designers produced electoral posters.

The development of Iranian domestic factories and manufacturing has led to the manufacture of a wide range of goods, necessitating the promotion of items for increased sales and the introduction of goods to the public in order to spread advertising messages. such as newspapers, posters, brochures, catalogs, banners, and packaging. Several offset

printing machines employ that to print each one of them. Advertising and Printing's Relationship Towns, cities, and metropolises grew as human societies and population density increased, leading to the emergence of villages. [11]

Large corporations replaced small and local companies in the interim. Business owners thought about introducing and advertising their items as a result of the growth, variety, and mass production of goods. Initially, this was accomplished via simple techniques like hanging cloth beside stores. Even so, as more sophisticated printing devices were developed later, commercials in a variety of sizes and forms started to emerge extensively. Offset printing machines, with their precision and excellence, allowed product owners a great deal of flexibility in producing a wide range of brochures, catalogs, banners, and enormous posters.

When offset quality printing and the artistic vision of graphic designers come together, beautiful and imaginative packaging is produced, which serves as a perfect advertisement for the products that are displayed on department store shelves. Printing has also had a big influence on information. One example of this is the film business, which has used giant posters to promote movies or television shows. Signs advertising concerts and exhibitions are also a great way to get people's attention. Propaganda on a political level is one of printing's most terrible consequences. Based on the information voters learn about the candidates during the election campaigns, the layout, printing, and distribution of election advertisements do play a significant role in exposing voters to the candidates and their platforms.

This kind of propaganda is highly regarded by the Iranian population and officials. They have also been crucial to the outcome of parliamentary and presidential elections in recent decades. The two presidential candidates' posters and propaganda phrases from the 1380s had a big influence on people's decision. Iran's economy also developed in the 1380s, and as the market expanded and demand rose throughout this decade, advertising advanced and saw a sharp growth in commercial advertising. In the 2001s, political posters and propaganda: During elections in Iran, advertisements play a crucial role in exposing candidates, their platforms, and their ideologies. The development of printing machines, along with their rapid speed and great quality, gave rise to a new form and aroma in representational marketing. Large representative posters and banners featuring their pictures and campaign slogans have been seen during local and national elections in the past few decades. A representative may occasionally be chosen in large part due to the unique image of the representatives or the unique design of a distinct campaign poster or slogan that registers with the audience. Iran hosted three presidential elections in the 1380s: in 2001, 2005, and

2009; These propaganda images and catchphrases were crucial in influencing the large number of voters who turned up to support their preferred candidate.

### **Types of Printing**

#### **Offset**

This kind of printing involves creating text and images on rubber surfaces that are cylinder-shaped, then pressing another cylinder to print the design onto paper. Offset printing presses are fast and best suited for printing books, newspapers, and adverts in huge quantities. [12]

#### **Flexo printing**

Flexo printing, so named because of its flexibility, is an embossed printing technique. This printing's high site and low cost in high circulations is one of its benefits. Flexographic [13]

Packaging is the primary use for printing on nearly all surfaces, including plastic, foil, cellophane, and paper. printing on bags made of plastic Other typical applications for this printing technique include books, office forms, periodicals, wallpaper, packaging covers, and newspaper attachments. [14]

#### **Heliogravure Printing**

Although the preparation is more costly and time-consuming, this printing method is comparable to offset printing. [15]

Printing in rolls at high Cn manufacturing facilities is a great fit for heliogravure printing. The primary application of this technique is in factory packaging. Postage stamps, ornamental coatings, cardboard boxes, liquid storage containers, candy and chocolate packaging, catalog and magazine printing, and flexible packaging are all used. [16]

#### **Silkscreen Print**

Among the most popular prints is this one. It is now possible to print on this type of material thanks to variations in the ink used in it. In other words, the silk method can be used to print objects that have a desired substance and appearance. [17]

The primary usage for this kind of printing is in advertising. Prints in monochrome or multiple colors on various surfaces can be produced with this technique. You can print images on a variety of materials, including fabric, porcelain, ceramics, metal, etc., using silk-screening. Printing with a silkscreen is affordable.

#### **Letterpress Printing**

This kind of printing, which uses lengthy based lead letters, is a widely used printing technique. Printing materials for superficial distribution, in-

cluding business cards, letterheads, pamphlets, etc., is appropriate. The letterpress technique is used for a variety of perforating tasks, as well as for gilding, embossing, and making folding or molding lines. [18]

### **Digital Print**

The newest technique in printing for office use and advertising is this kind of low-circulation printing. Every printed sheet has a different page with different visuals and content thanks to digital printing characteristics, and orders can be tailored. Because of how quickly it prints, it is also known as immediate printing. Because digital printing eliminates the need for a plate and allows for direct printing from a computer onto paper in limited editions at a reasonable price, it is a quick and convenient method for printing small prints for products or preparing samples for general printing. [19]

### **Offset Printing Machine**

Using the pressure of another cylinder, offset printing prints letters and images in reverse on the rubber surface of a revolving cylinder on paper. [20]

Three cylinders are present in most offset printing equipment. This kind of printing starts with designing a metal zinc page on which you want your content to appear. Next, this is the page that contains chemicals that are sensitive to images and text, printing ink, and the remaining content of the page. The design of the zinc sheet is pressed into the rubber cover of the second cylinder after it has been wrapped around the first cylinder. The rubber covering from the double cylinder is successively taken up by the white paper that encircles the third cylinder. [21]

In this kind of printing, the chemicals on the plate are impacted by the exposure process, and the resulting chemical reactions produce two crucial components: the water holder and the fat holder (ink). Offset printing is also known as surface printing since the printing activity in this process is dependent on the absorption of water and fat in the plate rather than bumps acting as the printing agent.

The majority of offset machines share the same structure and design.

These devices often comprise multiple sequential printing units, two types of roll paper, or paper that is moved from one area to another.

Offset Printing Device:

- Lighting: flowing water, flowing ink
- Cylinders: A paper cylinder is a rubber cylinder that houses the sink.

### **Rolling**

#### ***Water Rolling***

Before the glass sheets are dipped in ink, they need to be lightly dyed with water. Water lamps in contact with the zinc cylinder and water tank accomplish this. There are two categories of water systems in offset machines. The first are the water system's machinery, and the second are the water system's components. [22]

#### ***Zinc Rolling***

Systems for hydration and compositing are operated by cylinders known as Rolling. The printing machine's operation determines how complex the ink storage system is. Little printing devices that are frequently employed to produce letters play ancillary roles. Other versions, on the other hand, have larger roll amounts and are made to print text, graphics, and thin, accurate lines. By rolling around and up against the iron rolling, the composite feed mechanism in the central tray rotates on a continuous iron rolling machine to alter the combined quantity. One of the primary characteristics of the technology is its ability to disperse the substance in a uniformly thin layer with a concentration that varies across all printed regions, ensuring that all published articles are received equally. [23]

#### ***Cylinders***

Three cylinders made of rubber, paper, and zinc make up offset devices. The cylinders behave the same even though their shapes are varied. [24]

#### ***Zinc Cylinder***

The desired printing design will be replicated on zinc or plate, sheet metal, plastic, or paper with the right dimensions as stated in lithography. Printing requires the pressure that the zinc cylinder body provides. The zinc's diameter and the cylinder's diameter ought to match. The zinc's front and end edges can be held in place using the zinc clamp system. It maintains the zinc's consistent stretching throughout time. [25]

#### ***Rubber Cylinder***

When compared to Zinc from making simple jobs, the cylinder tire is left of the tire in terms of specs and appearance, with the exception of the system, no simulation. However, it should be of the rubber's elasticity more firmly on the cylinder would have to be. [26]

#### ***Paper cylinder***

The paper cylinder functions as a field where paper is moved to record the role of zinc on rubber to change position based on the shape. The purpose of the forme paper cylinder is to print on white paper by making contact with the compound rubber cylinder. [27]

### **Ink for Offset Printing**

In compound offset printing, the monochrome spot and two unique four-color CMYK are used.

Yellow, red, turquoise blue, and black make up the CMYK color spectrum. Together with turnover, these four colors create thousands of hues during particular lithographic interactions. [28]

### **persuasive signs: The semiotics of advertising**

Marks, jingles, and slogans are now ingrained in almost everyone's "mental encyclopedia" who lives in a modern culture. Advertising has shown to be effective in marketing commercial goods and services; in fact, from the early 1960s, it has been increasingly focused on social issues. Campaigns against drugs and smoking are two instances of how advertising strategies are used to advance public wellbeing. Furthermore, it goes without saying that political advertising appears to have no boundaries. Politicians at all levels of government now frequently use sophisticated, compelling kinds of advertising to share their platforms during elections and their personal opinions on social issues. [28]

Contemporary advertising is characterizable as a blend of art and science, because it employs both aesthetic techniques designed to influence how people perceive goods and services, and the tools of psychology and statistics to assess the effects of such techniques on consumer behavior. Advertisers and marketing agencies conduct extensive surveys to determine the potential acceptance of brand names, logos, etc. before they are advertised at costs that may add up to millions of dollars. If the survey convinces the manufacturer that several versions of, say, a package design, a logo, or a brand name, will appeal to a small number of purchasers, a research crew will then determine the extent to which a larger sample of consumers will react to them.

The advertiser makes a limited number of products with the new package design or displaying the new brand name or logo, and then introduces them in a test market once the one or two most popular variants have been determined. The advertiser will be informed of the most appealing variant based on the outcome of this final phase. [29]

Public relations, publicity, and propaganda all frequently use advertising. Propaganda is the art of persuading people using logical or emotive arguments in order to propagate and solidify doctrines, perspectives, beliefs, etc. that reflect certain interests and ideologies (political, social, philosophical, etc.). The art of publicity is using a public platform to spread any information about a person, organization, event, or product in an effort to draw attention to them. The field of public relations uses strategies and tactics aimed at creating positive. [30-36]

### **Why it sells: Decoding the meanings of brand names, logos, ads, and other marketing and advertising ploys**

Newspaper and magazine pages are covered in print advertisements. Posters can be seen on city walls, in buses, trains, and subways. Neon signs and billboards line the sides of the roadways and the streets. On radio and television, commercials frequently cut in. Unwanted ads appear on websites. Even television networks, periodicals, and other media outlets focus solely on advertising. Put simply, advertising is present everywhere. It is understandable why brand names, logos, trademarks, jingles, and slogans have permeated almost everyone's mental vocabulary in today's culture. Advertising has even taken center stage in the publicizing of social issues since the early 1960s, from anti-poverty to anti-smoking campaigns. Furthermore, it goes without saying that political advertising appears to have no boundaries. Politicians from all political parties now frequently use slick, compelling kinds of advertising to share their agendas during elections and personal opinions on societal issues.

It would be an understatement to suggest that in today's global market culture, advertising has become a pervasive means of conveying messages. Over 3,000 commercials are thought to be seen by the average American every day, and during their lifetime, they are expected to have watched three years' worth of television (Kilbourne 1999). Making use of both spoken and nonverbal cues to ensure that its messages as compelling as it can be, advertising has evolved into a necessary category of contemporary life, aimed at influencing attitudes and lifestyle choices by subtly pointing out the best ways to gratify our deepest desires and goals.

Numerous academic fields, including psychology, semiotics, anthropology, culture studies, communication science, and sociology, have seen a significant increase in interest in the study of advertising. Each of these fields approaches the topic from a unique perspective. This book primarily focuses on semiotics, a field of study that examines how texts and signs, including advertisements and commercials, create meaning and relate to the web of meanings that permeates a culture. Among its many goals, this chapter aims to introduce some fundamental ideas that will be used throughout and to provide a brief overview of the history of advertising.

### **Propaganda and Public Relations**

Advertising is just one of the persuasive arts of today. Public relations and propaganda are two more common ones:

- Propaganda is the art of disseminating and solidifying ideas that represent certain interests and ideologies (political, social, or philosophical, for example).

- The field of public relations uses strategies and tactics to create positive perceptions and reactions in the eyes of the general public or targeted audiences toward organizations, institutions, and/or individuals.

Similar to advertising, propaganda is one-sided information intended to sway people's thoughts, feelings, and behaviors. The distinction between the two is frequently hazy.

### **Conclusion**

One could argue that the development of printing in Europe around the fifteenth century marked the start of a new era in human history, enabling it to let the world's peoples, particularly those who were interested in fresh discoveries and knowledge, access the doors of human civilization. Before printing, a lot of manuscripts and images might have been lost or forgotten. Printing removed a lot of these restrictions by enabling the publication and duplication of several volumes. It made it feasible to show these pieces to future generations and preserve them. Therefore, it was published in science worldwide and became available to scientists and researchers without boundaries. Regretfully, the printing industry and its apparatus arrived in our dear Iran somewhat belatedly. A few made every effort to publish novels in Iran during that time, follow an upward trajectory, and stay up with the standards of those days' civilized societies. As a result of their work, numerous printing houses that produced books, periodicals, and newspapers were established. After learning how to operate these gadgets in Europe, a number of Iranians returned home and instructed pupils in this technique at Iranian-established schools.

Iran's connections with European nations helped the country's printing sector flourish throughout the Qajar dynasty. The printing and illustration industries also entered a new sector during the Pahlavi era because to scientific advancements and the sending of students overseas. When offset printing machines were introduced to Iran, a new chapter in the history of the printing industry was written. These high-quality, error-free devices sped up and improved the accuracy of the printing process, and the development of new models made it possible to reproduce art more quickly and widely. The press was undoubtedly impacted by the improvements in printing as well, which resulted in a rise of publications. Following the success of the Islamic Revolution, printing has undergone less advancement and metamorphosis as a result of the Cultural Revolution's modifications and the books' shift. The majority of propaganda then supported the war in the 1980s because of the forced war with Iraq. The state of the conflict caused the economy to stagnate and the ratio of supply to demand to decrease. In the printing industry, we saw tremendous shift starting in the 1990s. Thanks to technological advance-

ments, the printing and advertising business experienced growth in the 1380 solar year. With the development of science and technology during this decade, graphic designers produced incredibly inventive designs. The impact of printing and advertising on politics and political advertising is evident in the 2001s; global advancements brought new products to market. There was a greater need than ever for enterprises, products, and advertising because of the well-equipped factories and abundance of items. Meanwhile, introducing products through printed advertising obtained a specific role. Advertising changed significantly as a result of offset printing machines producing large quantities of high-quality brochures, catalogs, posters, banners, and product packaging.

As the economy of the nation improved, more people were purchasing a wider range of goods, which led to a boom in manufacturing. Utilizing their skills and imagination, graphic designers introduced goods to the advertising service. Printing and advertising have also been crucial to politics. Particularly when elections are held, Propaganda posters are printed throughout the nation or city by candidates to introduce themselves and their platforms.

As a result, they can secure the support of their parties, and the public can utilize these posters to learn more about the presidential candidates of their nation or their local legislators.

In order to close the gap left by the war and address its detrimental effects on the nation, society and societal attention after it ended concentrated on the war episode and its aftermath. Generally speaking, the main requirements of the 1980s society fall into three major categories. One example is offset printing, which may satisfy the needs of a sizable population in nations like Iran.

- Details regarding the election issue
- Information about advertisements
- Establishing chances for writers, scholars, etc. after the war.

In addition, a nation had to reconstruct and deal with the harm that war does to cities.

### **Conflict of Interest**

There is no conflict of interest in the publication of this article.

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