

# Exploring evolving trends of gender representation in digital advertising in Egypt

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## Abstract:

Representation of gender in Egyptian advertising has a long history of sick portrayal of the roles of women versus the roles of men. Researchers had argued for a long time that women are portrayed as less important, objectified commodity and soft victims. Although research shows that women in Egypt are negatively represented with the prevalence of unequal gender status through different media, it is observed that women representation in advertising in Egypt is evolving towards more equal and positive gender representation. Digital advertising is revolutionizing the way media affects people's cultures and values. Young generations specifically are heavily affected by digital media as it is available, sympathetic, tailored and young. It is becoming important to study the change of gender socio-cultural status in Egypt through analyzing contemporary trends of gender representation in digital advertising in Egypt.

Gender representation stereotypes in advertising in Egypt are investigated. Context of gender representation as well as gender role, occupation, ranking and equality are examined. Change in portrayal of context as well as roles have gone through some changes. Although women objectification has created a social pressure towards the change, but no change was observed. Graphic design elements are analyzed as well as signs used for gender representation. In addition, influence of digital advertising on young Egyptians is looked at. In order to do that the research is taking on a mixed method of socio-cultural and semiotics analyses. The research is studying only contemporary gender representation and the effects on young Egyptians. The research is studying whether or not gender representation in advertising in the digital age have experienced any kind of change.

## Keywords:

Gender, Stereotype, Representation, Digital Advertising

## Research Questions:

Q 1: Does the representation of gender in advertising in Egypt differ in contemporary time?

Q 2: What are the design aspects that are mostly used in portrayal of women?

## Research Aims:

### The research aims to:

- Explore how gender representation has changed in contemporary time.
- Illustrate how signs and graphic elements that represent gender in advertising had changed.

## Methodology:

The research used a qualitative method for its descriptive, explanatory and exploratory roles. This research aimed mainly to understand in a deep, detailed, and thorough way the changing

nature as well as the aspects of change of gender representation in advertising in Egypt, post the 25th of January revolution which is a contemporary changing subject. Moreover, qualitative method enabled an analysis of the context and the environment of the subject investigated.

The research used a combined visual analysis method. Semiotics and critical discourse analysis (CDA) methods were used. The CDA on one hand was used to describe, interpret then explain the ads. Semiotics on the other hand was used to identify signs and codes embedded in the ads that construct the meaning within the ad and with its sociocultural context. Analyzing the visual materials using semiotics allowed for the study of the cultural, political, economic, technical contexts through the presentation of signs and their meanings.

This mixed method of analysis considers different means by which the visual graphic elements worked together with their respective written texts and their contexts in the studied ads. This allowed a detailed investigation on what, how and why gender representation changed in advertising in Egypt since 2013. Advertisements were selected according to a focus group of professional Egyptian graphic designers. Facebook ads were selected according to the latest digital advertising in Egypt collected statistics. Analysis criteria were refined and finalized by the researcher depending on previous studies.

## **1- Introduction:**

Representation of gender in Egyptian advertising has a long history of sick portrayal of the roles of women versus the roles of men. Researchers have argued for a long time that women are portrayed as less important, objectified commodity and soft victims. For more than 50 years, researchers have been studying gender in advertising (Hawkins and Coney 1976). Some researchers asserted that advertising portrayal of gender is stereotypical and that there has been a variation of gender stereotyping over the years. (Courtney and Whipple 1983; Furnham and Mak 1999). It has also been found that images of women constructed by media have changed over time as they depend on the specificities of each particular country (Dabbagh, 2012).

Although research shows that women in Egypt are negatively represented with the prevalence of unequal gender status through different media, it is observed that women representation in advertising in Egypt is evolving towards more equal and positive gender representation. Digital advertising is revolutionizing the way media affects people's cultures and values. Young generations specifically are heavily affected by digital media as it is available, sympathetic, tailored and young. It is becoming important to study the change of gender socio-cultural status in Egypt through analyzing contemporary trends of gender representation in digital advertising in Egypt. To do that the research is taking on a mixed method of socio-cultural and semiotics analyses. The research is studying only contemporary gender representation and young Egyptians. This research studies whether gender representation in advertising in Egypt has changed over the years in the context of the digital age.

## **2- Stereotype of women representation in advertising in Egypt:**

Stereotypes either positive or negative provide safety and comfort to the ad audiences. People tend to associate with things they are used to, as humans are creatures of habit. That is why advertising uses and creates stereotypes. For a long time in previous cultures, women symbolized body and emotions, while men represent intellect and brain. (Hirdman 2004),

based on that, advertisers in Egypt focus on fashion and beauty as well as body care and style which indicates the importance of women's beauty and perfect physique. Some ads carry a connotation of the importance of beauty in winning a good husband and living a happy life. (Lund).

It is common through history of advertising in Egypt that women and men are represented in an unequal manner. Knowing that people who receive ads perceive it as if they are real without being critical, in addition to the impact of gender portrayal in advertising on the Egyptian audiences. Although Egypt for long time has been regarded as one of the most liberal countries of the middle east, advertising in Egypt has portrayed women in a stereotypical manner; where women are presented "as psychologically and physically defenseless, while males are overwhelming them (Stankiewicz & Rosselli, 2008)."



Figure (1) women are represented as in a less status than men

Recent years especially after the 25<sup>th</sup> of January revolution, gender representation has shown significant change in the stereotype of portrayal of women particularly in digital advertising. The revolution has contributed to a social and cultural shift in the role of gender and its stereotypical presentation in social media as a digital platform of digital advertising. The availability of the technology and the great contribution of Egyptian women in the up rise, led to an evolutionary representation of gender stereotype.



Figure (2) women and men are represented equally

### 3- Domestic context of women representation:

Women were presented in past times as thin beautiful and shy on one hand or as a mother, wife and less important gender. Women were portrayed as inactive housewives, who only seek to satisfy their husbands and mother-in-law. They were mostly represented as housewives; they depend on men, had secondary roles, and more likely to be set in the domestic sphere (Chuku et al. 2014, Debbagh 2012). Ads presented the female in the position of a housewife.



Figure (3): Women as housewives in a domestic context

According to Tarek Nour (2017), one of the pioneers in the field of advertising in Egypt, these portrayals are derived from our Egyptian culture. It is embedded in our traditions that women always exist domestically as housewives while the man is the one who works. See figure (3) in which ads from past times represent women in a domestic context as housewives who strive to please the mother in law and who are rewarded for being a good housewife.

### 4- Changes in occupation of women portrayal:

For a long time, discouragement of women's accomplishments especially in sports dominated the advertising scene. That is, advertisements in Egypt emphasize the notion that a number of sports, such as soccer, are only 'male-dominated'. For this reason, the majority of advertisements that utilize eminent soccer or athletic players are performed by male athletes, not females. See figure (4).



Figure (4): Men dominance in sport ad



Figure (5): Women in recent sport ad

Contemporary advertising in Egypt represents women as a strong partner in sports events either as spectator or as a player. It is common in recent ads to see Egyptian women in a sportive occupation, unlike past ads that portrayed men as the dominant gender in sports occupations.

Women occupational status is one of the prominent elements of stereotyping in advertising. (Eisend, M. 2010). Occupational status is an important category, as the most significant changes in gender equality development can be observed in this area, and gender equality in this area is a major concern of gender-related policy. Recent ads portrayed women as successful professional, human beings, Writers, businesswomen, physicians, entrepreneurs, among other professions that Egyptian women are portrayed occupying them. See figure (6)

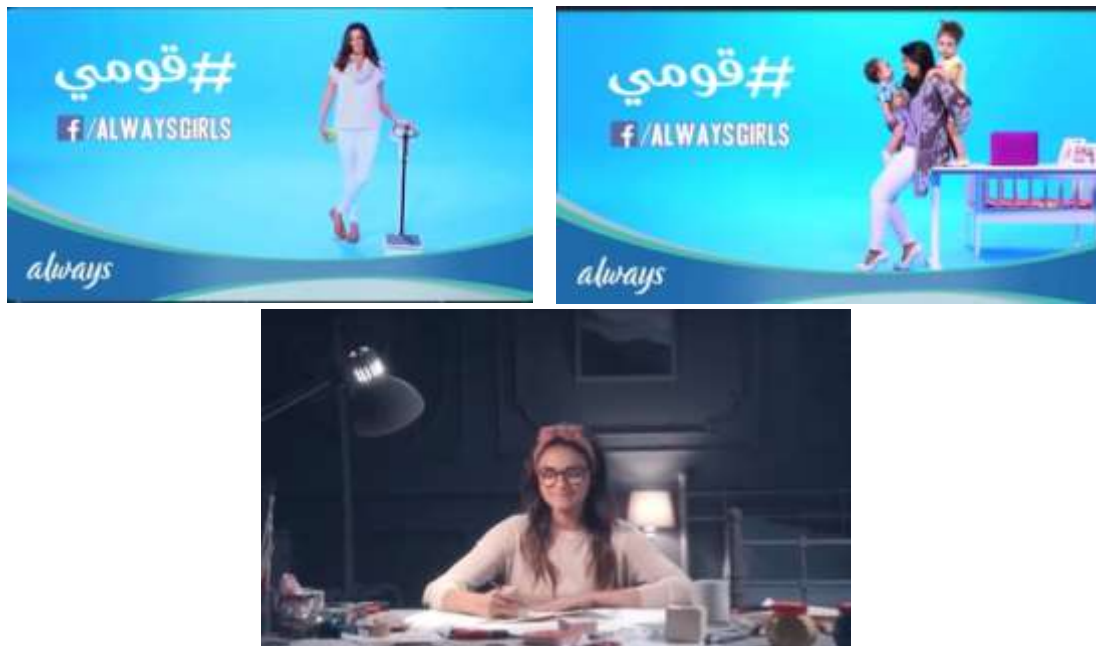


Figure (6): Women in recent occupations

### 5- Sexual objectification of women:

Women are objectified in advertisements in Egypt. They are used as sex tools to market certain products and services. Women are usually sexually victimized and objectified. As Arafa (2013) argues, women are still associated with sex and passivity and men were associated with power and activity.



Figure (7): Men in recent ad portrayal

Stankiewicz & Rosselli, (2011) asserted that Exposure to sexually objectifying advertisements of women produces “anti-women attitudes” and negative stereotypes. For example, the belief that females are only precious as tools for the aspirations of males, that a true man has to be sexually violent, that cruelty is “erotic”, and that females who are victims of a sexual attack “asked for it”. Females’ portrayal as sex tools and presenting them as victims of violence emphasizes the belief that obedience and surrender are inherent attributes in females.



Figure (8): Women as sex tools shown in the text



Figure (9): Women as sex tools shown as decorative objects

Women have been portrayed for long times and till now as a decorative object, where they ought to be beautiful and attractive according to the social and cultural unattainable standards. Through advertising women had been pressured to look perfect, as physical attractiveness was presented as the way to accomplish higher societal ranks.

One of the advertising campaigns that have been criticized for promoting sexism and gender discrimination concerns is Birell's 'skinny jeans campaign' 2009. The ad states that if you are to wear skinny jeans, you are not a man the ad appears to promote cat-calling, staring and maybe more. The latest campaigns have even attracted the anger of social media users who have accused Birell of sexism and the promotion of sexual harassment. "It is sexist. It is offensive, and more than anything, it is socially irresponsible. As a company with its popularity, promotion of social issues is not only a duty but an obligation." Khairat, M. 2015



Figure (10) Birell Ad Man Up (be a man) 2009

## 6- Stereotype of men representation in advertising in Egypt:

Stereotypes of men representation in advertising in Egypt are; strong, competent, and outgoing. He is depicted in professional roles; the man is depicted as a busy and serious businessman in suit and tie. Also researchers have found that men are represented in all ages, and that men dominate news media and scientific knowledge programs. Masculinity is described by words such as; skill to conquer, strength and not being a woman and is associated with activity, which is accentuated in media contexts. (Ekenstam, Frykman, Johansson, Kuosmanen, Ljunggren & Nilsson, 1998, Hirdman, 2004)



Figure (11) women are represented as drama queens

## 7- Contemporary scene of gender representation in Egypt:

Egypt has put the issue of woman's empowerment at the top of its priorities during the past decade, through institutional arrangements and legislative changes. In addition, a large number of initiatives and procedures have been initiated (NHDR 2010). Great steps have been made by women in the workplace and in education over the years, and it is questionable how gender portrayal in advertising mirrors what is a widely becoming accepted social goal and what is happening in the real world.

Egyptian women are taking active part in the development of the society. For example, there are number of female ministers, 89 females in the Egyptian parliament, and others in the judiciary, mayors. (El-Sherbini et al 2017). In 2017 UN. Women in Egypt has released a campaign consisting of three illustrated ads to highlight the low representation of women in the fields of science, high—technology and politics. Drawing on the concept of famous illustration books "Where's Waldo?" the "Finding Her" illustrations feature a space station, a parliamentary building and a scientific research facility. The ads are a challenge to spot the only woman in each sector, and every ad carries the campaign's message, "Finding women in technology/politics/science shouldn't be this hard. Let's work together for equal representation in the workplace." Cairo Today (2017).



Figure (12): Can you spot the woman in this illustration? (IC4Design:2017) (DDB Dubai)

## 8- Influence of digital advertising on Egyptian youth:

Digital advertising is becoming increasingly important in the Egyptian market. Around half of Egypt's population is under the age of 29. For young Egyptians digital advertising is easily accessible and targetable information upon usage, hits and views. Young Egyptian users are leading the growth of digital advertising along with the decrease of value of print medium. According to Natalie Youssef, CEO of Enova Digital Marketing and Advisory, who told "Daily News Egypt" in March 2015. The value of digital advertising in the market has



reached around LE500m (\$68.1m), or 7% of total advertising expenditure. And the global annual growth of digital advertising value reaches 120%. (Oxford business group)

According to cultivation theory, media has long-term effects on viewers that are small, gradual, indirect, while at the same time cumulative and significant. In digital advertising repeated exposure can cultivate viewers' perceptions and beliefs to be more consistent with the world presented in the digital media than with the real world (Gerbner et al. 2002). Advertising is perceived as shaper and mold to social and cultural values and norms. Adding to this, advertisers use existing values mirroring them in the ads. As given the many factors affecting values and norms of a society, the advertising effect is scarce. Eisend, M. (2010) results support the mirror argument over the mold argument in the long-standing debate about advertising's consequences in a society.

The ways that Egyptians make sense of the social world around them are greatly influenced and shaped by the digital media representations (Lavie-Dinur & Karniel, 2013), especially young Egyptians. Egypt had the most significant growth in internet users and social media in 2017. Internet user penetration in Egypt reached 48% in 2017 with an estimated number of 45 million. This share is projected to grow to 50.8% in 2018. Egypt rate is getting closer to the global Internet penetration rate which is estimated at 49.2 %. (Statista Report). According to E. marketing survey, about 26% of internet users in Egypt like to follow e-advertising while only about 20% trust them. 32% of internet users trust the technology sector's electronic advertising, while 34% trust the telecommunications sector, 27% trust fashion, 62% trust home appliances, and 25% do not trust e-advertising in the financial sector.

More than 14 million of Egyptians are very active on social networks, can't stop posting, chatting and Liking everything in sight. Unsurprisingly the largest age group for Facebook usage is currently 18-24, followed by the users in the age of 25-34. Both sexes are logging on for their social media fix as 64% male users and 36% female users in Egypt sign in. (Ahmad, 2017)

Egyptians young people's attitudes towards digital advertising are positive in general. 90% of internet users in Egypt had noticed some types of digital ad. 61% of them view it as eye-catching, and only 26% of them would like to follow it. Only 20% of them may trust it. About 39% of the internet users who are interested in online ads totally trust ads by the technology sector, while 34% of them totally trust ads by the communication sector then follows textiles, fashion & apparel sectors (27%) and home appliances sector (26%). Only 28% have interacted with online ads by clicking on the Ad itself, compared to 40% who ignored the ad. Users younger than 25 years trust more the Ads displayed in-video (46% of them) compared to the users in the other age groups. Males are much more likely to trust in all types of online ads than females. In addition, Facebook and YouTube are getting the highest increase in advertising. (E. Marketing-Egypt)

### **9-Gender Representation in Contemporary digital advertising scene:**

Advertising industry in Egypt has struggled to keep its role as a key player in the Middle Eastern region amid 25th of January, 2011 revolution. After two years of slowing down, the advertising industry started to show signs of recovery as per as spending and production. Sharp social and cultural changes have been manifested throughout the two years 2011 up till 2013 during serious political turmoil. Starting 2013 after political stability, the advertising

industry gained back its place among the main advertising markets in MENA. This research looks at gender representation changes that took place and are manifested in advertising in Egypt since 2013.

Sociocultural changes took place with high velocity, contradictory directions and strong impact. As part of the Egyptian scene, advertising as content, strategy and design showed a significant amount of changes. Driven by the sociocultural change and mirroring it or influencing the change; either a mere reflection or a changing piston, advertising design in Egypt has changed. Representation of Egyptians in general and specifically gender representation was altered.

Gender roles changes can be detected. Women empowerment is shown in advertising in Egypt, guided by the present government policies and actions concerning women empowerment. Women in Egypt earned their place in the front rows of the social, political and economic fronts during participating actively since the revolution in the political life. Recalling great Egyptian women in history drove the contributions of contemporary women improving today's gender role in Egypt.

A surge of secular approach influenced the diminishing of the heritage of wrongly silencing and mistreating women depending on a false religious approach that dominated Egypt for years. A generation that believed that change can happen by their own hands shaped the scene in the young dominated industry. More critical and fierce young people refused to take on old, falsified and set religious opinions that ruled the society for decades. The "World Value Survey" that was conducted in 2011 asserted that religion is seen as a very important part of Egyptian lives; when asked about the importance of religion as much as 94.1% respondents said it was very important. (World Values Survey: WV6 Results – Egypt 2012). Yet after the "brotherhood" rule of Egypt, a rise of secular approach prevailed. Subsequently these two tendencies – religious and secular – are shaping modern gender representation in Egypt.




All this lead to a notable change of women representation stereotypes in advertising in Egypt. That is why the research is studying the context of gender representation, graphic design elements and symbolic codes that demonstrated it. Moreover, advertising strategies and execution techniques are studied. To achieve that semiotics and critical discourse, analysis and literature studies were used.

## **10- Analysis:**

To achieve the purpose of analyzing gender representation certain aspect of portrayal are investigated. Criteria chosen for analysis are chosen using focus group of specialists using CDA. Ads are analyzed using macro-sociological analysis of social practice, which firstly, explores the social practices as the context within which the interactions (between the reader and the adverts) take place; and secondly, considers the relation of the text to the existing social order. Semiotics is used for the signs used in gender representation.

The analysis focuses on three criteria; the first is traditional and untraditional gender representation through looking at the context, signs and graphic design elements that form the representation. The second is gender ranking where portrayal of ranking of women versus men is looked at through context, signs and graphic design elements. The third is objectification, where all previous three aspects are linked.




**Table 1: Representation context**

	Criteria	Example
<b>CONTEXT</b>	<p><b>Traditional female role / untraditional female role.</b> More untraditional contexts are portrayed. Equal roles for both genders are seen in different contexts. Travel and tourism, medically dominated contexts are shown.</p>	 <p><b>Fly</b> From JEDDAH to Sharm El Sheikh Economy only</p> <p><b>Cairo Cosmo Center</b> Sponsored - G السنة دي بتحتفل معاكم بمرور 13 سنة علي وجود عيادات كايرو كوزمو سنتر، وفخورين اتنا الدرنا نساعدكم توصلوا للى بتتمنوه في كل ما Continue Reading...</p>
	<p><b>Gender ranking.</b> Women are not portrayed as of less rank concerning their existence context. But as equals either in domestic or public contexts.</p>	
	<p><b>Decorative object role.</b> Women still portrayed as of decorative role for different brands and contexts.</p>	 <p><b>universal</b> THE TOP</p> <p><b>Rivoli</b> اكتشفي جمالك</p>

**Table 2: Representation signs**

	Criteria	Examples
<b>SIGNS</b>	<p><b>Traditional female role / untraditional female role.</b> Untraditional dress codes, accessories and colors are used when representing women.</p>	
	<p><b>Gender ranking.</b> Equal height and perspectives are used as well as dominant perspectives and layout.</p>	
	<p><b>Decorative object role.</b> Women are used as commodity, thin, beautiful, fit and sorted. Women facial and body features are still modified and standardized to fit the stereotypes.</p>	

**Table 3: Representation using graphic design elements**

Criteria	Examples
<p><b>Traditional female role / untraditional female role.</b> Layout, color, shapes, lines; principles of design are used in untraditional way.</p>	
<p><b>Gender ranking.</b> Arrangement of space, area, foreground and background, and correlation depict equal ranking.</p>	
<p><b>Decorative role.</b> Focus is on women beauty and posture; facial expressions are used to assure the decorative role of women.</p>	

GRAPHIC DESIGN ELEMENTS

## 11- Conclusion:

Gender representation has shown significant change in the stereotype of portrayal of women particularly in digital advertising. Contemporary advertising in Egypt represents women as a strong partner in sports events either as spectator or as a player. It is common in recent ads to see Egyptian women in a sportive occupation, unlike past ads that portrayed men as the dominant gender in sports occupations. Women are still objectified in advertisements in Egypt. They are used as sex tools to market certain products and services.

Young Egyptian users are leading the growth of digital advertising along with the decrease of value of print medium. In digital advertising repeated exposure can cultivate viewers' perceptions and beliefs to be more consistent with the world presented in the digital media than with the real world. Egypt had the most significant growth in internet users and social media in 2017. Internet user penetration in Egypt reached 48% in 2017 with an estimated number of 45 million. This share is projected to grow to 50.8% in 2018. Egypt rate is getting closer to the global Internet penetration rate which is estimated at 49.2 %.

Since 2013 sociocultural changes took place with high velocity, contradictory directions and strong impact. As part of the Egyptian scene advertising as content, strategy and design showed a significant amount of change. Driven by the sociocultural change and mirroring it or influencing the change; either a mere reflection or a changing piston, advertising design in Egypt has changed. Representation of Egyptians in general and specifically gender representation was altered.

Drawing on the analysis results, women representation has shown change in the context of representation. Women are represented in untraditional contexts like, sports venues and work environments rather than domestic traditional contexts. Same contexts are used for women and men that reflect equal gender ranking representation. Contexts of objectification of women are still used. Women are still objectified.

As for the graphic design signs used to represent gender, women and men are represented in balanced number, the positioning of both genders is equal as well as height, perspective, dominance, postures, and facial expressions. Colors are still used stereotypically.

A rise of secular approach influenced the diminishing of the heritage of wrongly silencing and mistreating women depending on a false religious approach that dominated Egypt for years. A generation that believed that change can happen by their own hands shaped the scene in the young dominated industry. More critical and fierce young people refused to take on old, falsified and set religious opinions that ruled the society for decades. Equal ranking of genders is represented in digital advertising in Egypt. All this lead to a notable change of women representation stereotypes in advertising in Egypt.

**12- References:**

- Ahmad, Yasser: MENA Digital Statistics, digitalmarketingcommunity.com: (2017)
- Arafa, Alia M.: Perception of women in Egyptian advertising: MA Thesis: The American University in Cairo: unpublished. (2013)
- Cairo Today: UN Women Egypt launches workforce gender inequality campaign: Thu, Feb.23,2017.
- Chuku, C. D., Ofuru, H. C., & Azubuike, C.: Amplification of Stereotype Perceptions Against Women in Television Commercials in Rivers State: A Case Study of Selected Stations. *International Journal of Academic Research*, 6(2). (2014).
- Courtney, A. E.; Whipple, T.W.: Women in TV Commercials. *Journal of Communications*, 24. (1974)
- Debbagh, M: Discourse analysis of the representations of women in Moroccan broadcast news. *The Journal of North African Studies*, 17:4, 653-670. (2012)
- Dodoo, Naa Amponsah: Looking in from beyond: Gender stereotyping in Egyptian advertising: Ethical action. WordPress.: <https://ethicalaction.wordpress.com/2013/04/22/looking-in-from-beyond-gender-stereotyping-in-Egyptian-advertising/>. (2013)
- Eisend, Martin: A meta-analysis of gender roles in advertising: *Journal of the academy of marketing science*: 38:418–440: Springer (2010).
- El-Sherbini et al: Women as reflected in Egyptian TV commercials: The European Conference on Media, Communication & Film 2017: Official Conference Proceedings (2017).
- E. Marketing Egypt: [www.emarketing-egypt.com](http://www.emarketing-egypt.com) (2019):
- Furnham, A., & Mak, T. (1999). Sex-role stereotyping in television commercials: a review and comparison of fourteen studies done on five continents over 25 Years. *Sex Roles*, 41, 413–437.
- Gerbner, G., Gross, L., Morgan, M., Signorielli, N., & Shanahan, J. (2002). Growing up with television: Cultivation processes. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 43–67).
- Hawkins and Coney 1976). Hawkins, D. I., & Coney, K. A. (1976). Advertising and differentiated sex roles in contemporary American society. *Journal of the Academy of Marketing Science*, 4, 418–428.
- Hirdman, Anja: Tilltalande bilder. Genus, sexulitet och publiksyn I Veckorevyn och Fib
- aktuellt. Stockholm: Elanders digitaltryck AB. In Norden, L. 2006, gender roles in magazine advertisements, a comparison between Egypt and Sweden, the university of Lund, (2004).
- Khairat, M.: The beer company promoting sexism and sexual harassment in Egypt: <https://egyptianstreets.com/2015/03/27/the-beer-company-promoting-sexism-and-sexual-harassment-in-egypt/> (2015).
- Lavie-Dinur, A., & Karniel, Y.: National Identity and the Representation of Palestinian Arab Women's 'Otherness' in Reality Shows on Israeli Commercial Television. *Critical Studies in Television: The International Journal of Television Studies*, 8(1), 52-72. (2013).

- NHDR: Egypt human development report 2010: Youth in Egypt; Building our future: Virgin Graphic, (2010).
- Norden, L.: Gender roles in magazine advertisements, a comparison between Egypt and Sweden, the University of Lund, (2006).
- Nour, T.: E-mail Interview. In El-Sherbini et al 2017: Women as reflected in Egyptian TV commercials: The European Conference on Media, Communication & Film 2017: Official Conference Proceedings, (2017, June 7).
- Oxford business group: The Report: Egypt 2019: www. Oxfordbusinessgroup.com, (2019).
- Stankiewicz, M. & Rosselli, F.: Women as sex objects and victims in print advertisements. Springer Science Middle Media. Retrieved from [http://www.skidmore.edu/classics/courses/2011spring/gu101/women as sex Objects & Victims in Print Advertisements.pdf](http://www.skidmore.edu/classics/courses/2011spring/gu101/women%20as%20sex%20Objects%20&%20Victims%20in%20Print%20Advertisements.pdf), (2011).
- Statista Report Egypt- Statistics and Facts: www.statista.com: Plecher, H., (2019).