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ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

A Metaphorical Approach to Developing Behavior Within the Context of the Covid-19 Pandemic

Covid-19 Pandemisi Bağlamında Davranış Geliştirmeye Yönelik Metaforik Bir Yaklaşım

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Abstract

Although the COVID-19 Pandemic is a global health crisis, it is an epidemic that re-regulates many areas of life and profession. This study focused on designs made by independent designers to protect and help protect people from disease. So, the relevant tendency is important in raising awareness and improving the desired behavior during the current COVID-19 pandemic. For this reason, the iconic designs of an independent designer in Turkey were examined to raise awareness at the point of the pandemic. Thus, it is aimed to understand the role of visuals in raising awareness and creating behavior. In the analysis, the semiotic analysis method was used. According to the analysis, it is seen that the examined visuals are quite remarkable often calling for protection from the new Coronavirus through euphemism and often using metaphors. On the other hand, it may be thought that the visuals examined may not convince everyone to be careful and avoid exposure to the virus. In the study, a social network analysis was also conducted to understand the appearance and interaction status of the pandemic in social networks, and the networks '#evdekal' (stay at home) and '#hayatevesigar' (life fits into the home) on Twitter were examined. The results of the social network analysis show that the course of the pandemic did not arouse public reaction (in the scope of the analysis period). However, the fact that close connections cannot be established between different networks and the presence of the government party and the Minister of Health in the networks is also important in terms of public opinion and interaction.

Keywords: COVID 19 Pandemic, Developing Behavior, Visual Communication, Design, Semiotics

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Öz

COVID-19 Pandemisi küresel bir sağlık krizi olmakla birlikte, birçok yaşam ve meslek alanını yeniden regüle eden bir salgındır. Bu çalışma, bağımsız tasarımcıların insanları hastalıktan korumak ve korunmalarına yardımcı olmak için hazırladıkları tasarımlara odaklanmıştır. Öyle ki ilgili eğilim, mevcut COVID-19 pandemisi sırasında farkındalık yaratma ve istenen davranışı geliştirme noktasında önemlidir. Bu nedenle, pandemi noktasında farkındalık yaratmak için Türkiye'deki bağımsız bir tasarımcının ikonik tasarımları incelenmiştir. Böylelikle görsellerin bilinç geliştirme ve davranış oluşturma noktasındaki rollerinin anlaşılması amaçlanmaktadır. İncelemede, göstergebilimsel çözümleme yöntemi kullanılmıştır. Çözümlemeye göre, incelenen görsellerin oldukça dikkat çekici olduğu ve çoğu zaman örtmece yoluyla yeni Koronavirüsten korunma çağrısında bulunduğu ve sıklıkla metaforlar kullandığı görülmektedir. Öte yandan, incelenen görsellerin herkesi dikkatli olmaya ve virüse maruz kalmaktan kaçınmaya ikna etmeyebileceği de düşünülebilir. Çalışmada ayrıca pandeminin sosyal ağlardaki görünümünü ve etkileşim durumunu anlamak için, bir sosyal ağ analizi de yürütülmüş, Twitter üzerinde oluşan '#evdekal' (evde kal) ve '#hayatevesigar' (hayat eve sığar) ağları incelenmiştir. Sosyal ağ analizi sonuçları, pandeminin seyrinin (analiz dönemi kapsamında) kamuoyunda tepki uyandırmadığını göstermektedir. Buna karşın, farklı ağlar arasında yakın bağlantıların kurulamadığının gözlenmesi ve ilgili ağlarda hükümet partisi ve Sağlık Bakanı'nın mevcudiyeti, kamuoyu ve etkileşim açısından önemlidir.

Anahtar Sözcükler: COVID 19 Pandemisi, Davranış Geliştirme, Görsel İletişim, Tasarım, Göstergebilim

PART I:

Introduction

The joint struggle against the new type of Coronavirus channels individuals to new or updated practices as there have been numerous calls and applications regarding the threat of COVID-19. However, the designs that aim to raise awareness concerning COVID-19 with a robust visual rhetoric (also interesting ones) have also grasped attention in this process, and the majority of these are aimed at increasing awareness of the new strains of Coronavirus. Art educator and graphic designer Dogan Celebi, from Samsun in Turkey, prepared and shared several visual designs on Instagram at the initial stage of the COVID-19 pandemic. Celebi's visual designs thematically symbolize a visual struggle against the pandemic, bear signs of acceptance-rejection criteria, such as social practices, and aim to develop behavior during the pandemic. Therefore, the relevant visuals (ten designs in total to limit the scope) were selected with judgment sampling and analyzed within the framework of Barthes' semiotic analysis approach. The allegory and metaphorical messages in the related designs are explicated. The role of visuals in developing behavior is also discussed in the study. In the study, networks on Twitter in Turkey, related to the themes '#evdekal' (stay at home) and '#hayatevesigar' (life fits into the home) are also examined using social network analysis.

Metaphoric Visuals for the COVID-19 Pandemic

Visuals have gained great significance in the context of health communication during the COVID-19 pandemic period. The significance of visual communication in the course of a pandemic can be understood from the abundance of visual images and videos circulating on the Internet regarding the pandemic. Memes, various images, and political cartoons reveal our collective experiences with the virus and attitudes about it. It should also be noted that political visuals, and visuals directly aimed at health protocols, have meanwhile increased. The UN called for informative art posters at the beginning of the epidemic, and numerous striking and influential visuals came out. To exemplify, the poster[1] below, showing a doctor wearing an apron, gloves, and mask in place of Uncle Sam draws attention to the severity of the pandemic in an apprehensible way.

Image 1. A Doctor Uncle Sam (The final addition to a post on Graphic Medicine archiving COVID-19 comics from before March 12$^{th)}$, u bruce texx, Oct 15, 2020, https://uxdesign.cc/the-important-art-of-visual-healt-h-communication-e447f80fc1ab

Kearns and Kearns (2020) argue that public health institutions, governments, and media organizations turn to cartoons about pandemic measures and mediated impressive efforts. Considering that cartoons have long been used as tools for utilizing the power of visuals, text, and storytelling to present science in graphic narratives, they can be said to have been used as a supportive public health instrument during the COVID-19 pandemic. In this regard, visuals aimed at routinizing social distance, such as images that offer contactless greetings as alternative behavior to help reduce the spread of COVID-19, have made a considerable impression in the course of the pandemic.

1 u bruce texx, Oct 15, 2020, https://uxdesign.cc/the-important-art-of-visual-health-communication-e447f80fc1ab

Image 2. A Cartoon During the Pandemic Process, from: 'Why should we stay 2m away from others when socially distancing?' by Dr. Cilein Kearns (Artibiotics) (Kearns ve Kearns, 2020, p. 140)

Tahir et al. (2020) indicate that although visual communication is used as an important element when submitting messages during COVID-19, the understanding and acceptance of the target audience before the visual presentation is also an important factor to be considered. Therefore, an image full of messages should be following the audience addressed through a suitable channel and platform. This is because target audiences have different perceptions of the received message, and not all of the target audiences have the same understanding, will, and needs. For example, the target audience of the visual below is the entire Malaysian Muslim population (Tahir et al., 2020, p. 175).

Image 3. A Visual for Malaysian Muslims during the Pandemic Process
(*Source from Infographic Bernama*, Tahir et al., 2020, p. 175)

Li HO-Y et al. (2020) discuss the potential of YouTube as a major social media platform in terms of supporting or hindering public health efforts. The significance of YouTube for individuals

and young people in the digital age is also noteworthy here. Based upon the fact that the utility and accuracy of the most-watched YouTube videos during the pandemic have not been investigated, Li HO-Y et al. emphasize that more than one-fourth of the most viewed YouTube videos during the period of COVID-19 contain misleading information and reach millions of viewers worldwide. Furthermore, public health institutions should make better use of YouTube to provide timely and accurate information during the unfavorable course of the pandemic. As a communicative effort, this should also be considered in the context of minimizing the spread of misinformation in the process (2020). Matta (2020, p. 13) also states that appropriate communication, built particularly on young communicators, can help cut off noise, share facts and build confidence in science and governance in the fight against epidemics and pandemics. Moreover, the role of science communication should come to the fore in this process and convey verified information to common audiences.

Art educator and graphic designer Dogan Celebi has designed and shared some remarkable visuals on Instagram during the pandemic (his Instagram user name is dodidogan). These images, which symbolize a metaphorical visual struggle against the pandemic, were selected with judgmental sampling thanks to their authenticity and thematic properties. Semiotic analysis is applied to the visuals through Roland Barthes' method. All the visuals examined in this study were taken from Dogan Celebi's personal Instagram account (https://instagram.com/dodidogan?utm_medium=copy_link, April 18, 2021). The prominent themes in the examined visuals, are 'Stay at Home', 'Life Fits into Home', 'not hoarding/hoarding', 'spread of the virus', 'waste', 'fear', and 'protection' have been frequently voiced during the pandemic. A total of ten designs/visuals with relevant themes were examined. The images were selected by the simple random sampling method, and the analysis was limited to ten images for feasibility. Permission was obtained from Dogan Celebi via e-mail to review these designs, and it was archived electronically by the author.

Visual Communication for Behavioral Change

Methodology

COVID-19 themed visuals used in the study have been analyzed within the framework of Roland Barthes' semiotic analysis. Barthes built this analysis on an image's literal meaning and connotations and highlighted mythical and metaphorical interpretations. Barthes (1968; 2018) states that semiotics aims to take any sign system, regardless of matter and boundaries derived from Saussure's approaches, first published in 1916, in the general linguistics course. The sign offers the meaning of the signifier and signified text and content. Semiotics briefly examines the generation, transmission, and interpretation of symbolically represented meanings (Mingers et al., 2017).

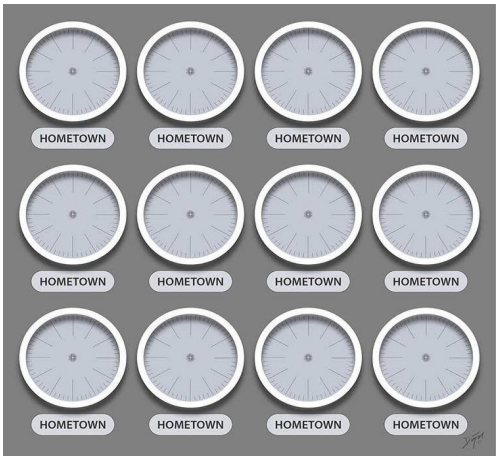
Eco (1976a) thinks that semiotics is, '…about everything that can be perceived as a signifier' and points out that signs consist of printed and spoken words, images, sounds, gestures, and objects. Stamper (1993) asserts that sections of semiotics have traditionally been 'syntactic', 'semantic', and 'pragmatic' as these parts are related to the structures, meanings, and usage of signs that reflect the philosophical origins of subjects. Curtin (2014) also highlights that semiotics can provide a helpful perspective on formalist analysis. It facilitates understanding as to how representation generates

meaning on a large scale (language, images, and objects) or creates processes with which we understand or associate its meaning. Berger (2010) asserts that everything we do in daily life sends messages about us with various codes. Semiotics makes these messages understandable.

The Analysis

Visual 1. Brokenkfast.

The linguistic message in Visual 1 is 'Brokenfast'. The image shows a slice of bread (on a cream-colored background) with a virus depiction. It points to the danger of viruses through the consumption of objects, and habits during the COVID-19 pandemic, as the meaning of bread, which is an essential part of breakfast culture, is utilized. The message embedded in the upper language in using 'brokenfast' instead of breakfast is to make a metaphorical reference to individuals who violate social distancing rules by queuing for bread with little distance between them.



Visual 2. Hometown.

The linguistic message in Visual 2 is 'Hometown'. There are twelve clock drawings shown in white on a grey background. The time metaphor connotation indirectly implies that the virus poses the same danger everywhere regardless of time. The message in the metalanguage is that the virus is widely spread. In addition, there may be a reference to the fact that the relativity of time has disappeared during the pandemic process.

Visual 3. Stay at home.

The linguistic message in Visual 3 is '#Stay at Home'. There is a virus drawn on moonlight in this image. The virus drawing metaphorically depicts the moon, while the virus's reality is quite central. The message embedded in the metalanguage is the importance of staying at home during the anti-virus process.

Visual 4. Stay at home 2.

The linguistic message in Visual 4 is '#Stay at Home'. There is an image of a raindrop, a snowflake, and a virus, as well as a cloud at the top on a light blue background in the picture. The metaphorical

weather connotation with weather icons directs attention towards the spread of the virus. The message embedded in the metalanguage is to stay at home, a meaningful discourse, especially during the initial phase of the pandemic process, and a necessary precaution against transmitting the virus.

Visual 5. Life Fits into Home.

Visual 5 does not contain linguistic messages with its small house depiction, a balloon floating over the house on a floor in light cream, and dark blue tones from top to bottom covered with virus images. A smiling face emoji is drawn onto the floating balloon. The connotation is to draw attention to the necessity to stay at home for individuals as a metaphorically used location visual/icon. The message embedded in the metalanguage is the precautionary vision built on the 'stay at home' discourse and the positivity that it would bring.

Visual 6. Waste.

The linguistic message in Visual 6 is '#Do Not Waste'. Various sizes of toilet paper are seen on a field in the image. The connotation of COVID-19 in the image refers to individuals stockpiling toilet

paper during the virus outbreak; the toilet paper is metaphorically portrayed as crops. The message embedded in the metalanguage is that during the pandemic, the understanding of sharing should be developed/embraced, and not being wasteful, including consumption habits.

Visual 7. It is time to protect/Stay at Home.

The linguistic message in Visual 7 is 'It is time to protect'. The image shows a clock design on a cream-colored background. Each time period on the clock is shown in purple as a virus metaphorically, as it highlights that the virus is anywhere, at any time. The message in the metalanguage, for all time periods, is the necessity to be protected from COVID-19. In this image, it may be a reference to the fact that the relativity of time disappears during the pandemic process.

Visual 8. Do not be afraid, but be protected.

The linguistic message in Visual 8 is '#Do not be afraid, but be protected'. The image shows black-rimmed spectacles on a white background. There is a virus depiction on one of the eyeglasses that metaphorically refers to the dangerous consequences of the virus by highlighting a broken eyeglass. The message embedded in the metalanguage is that protection should precede any fear of the virus.

Visual 9. Hoarding.

The linguistic message of Visual 9 is '#Do not hoard, but share'. The visual presents an inverted, round white bowl with spaghetti pasta placed on the sides in the form of handles. The bowls' handles resembling a mask, vital Coronavirus equipment, is a connotation metaphor to raise awareness regarding masks. The image's metalanguage refers to individuals who hoard products such as pasta. The initial phase of the COVID-19 pandemic draws attention to the importance and necessity of sharing instead of stockpiling.

Visual 10. Hoarding 2.

The linguistic message in Visual 10 is 'Do not hoard'. The image depicts a black bat with an ear of wheat in its mouth on a cream-colored and blue background. The connotation refers to discussion regarding the claims that the virus outbreak was caused by a bat; the consumption of exotic animals in China, where the Coronavirus was detected, is commonplace, and the claim that wild animals are the source of these viruses, with the suggestion that the Coronavirus may have been transmitted

from bats to humans via a pangolin[2]. The message embedded in the metalanguage is the need to share rather than stockpile food and consumer items during the pandemic.

In the study, networks on Twitter related to the themes '#evdekal' (stay at home) and '#hayatevesigar' (life fits into the home) are also examined using an analysis of social networking in Turkey. As a result, the aim is to understand how these themes relate to mediate interactions. As a popular trend, and focusing on social networks' structure, social network analysis (SNA) includes, '*A large set of methodological, statistical, and theoretical approaches that are developed for the analysis of relational data*'. According to certain approaches, '*A social network is defined as a set of nodes and their relations*' (*ties*). It should also be noted that social network analysis is a large and growing research group on the measurement and analysis of relational structure. Social network analysis points to interactions and their forms (Friemel, 2017; Butts, 2008). The analysis was conducted between 22-30 March, 2021, selected by simple random sampling. This period is also crucial for Turkey with its increased number of mutated viruses and current cases; on 31 March, 2021, the number of current daily cases (individuals who tested positive within twenty-four hours) in Turkey was announced as 39,302 cases. On the same day, 152 citizens died due to COVID-19. Turkey has experienced a significant change in the political system recently (Yegen, 2020); a 'Coronavirus risk map' is published weekly by the Ministry of Health. This Risk Map of Turkey sees the Ministry of Health rating each province at low, moderate, high, and very high risk. According to the 20-26 March, 2021, risk map shared by Health Minister, Fahrettin Koca, on his Twitter account, fifty-eight cities, including Ankara, Istanbul, and Izmir, were included in the red category, the high-risk group, as shown in Figure 1 and Table 1. [3]

The Ministry of Health announced that provinces with a weekly case count of less than 10 per 100 thousand would be considered as 'low risk', those with 11-35 per 100 thousand 'moderate risk', those with 36-100 per 100 thousand 'high risk', and those with over 100 per 100 thousand would be considered 'very high risk'. Accordingly, blue represents low risk, yellow represents moderate risk, orange represents high risk, and red represents very high risk. The number of cases is not the only criterion for determining color codes. Criteria such as the number of cases, population ratio, increase/decrease rate, vaccination rate, intensive care, and service capacities were calculated and explained on the map.[4]

2 See 'Study: Coronavirus could have been transmitted from a bat to humans via a pangolin', 10.04.2020, https://tr.euronews.com/2020/04/10/arast-rma-koronavirus-yarasadan-insana-pangolin-arac-lg-yla-bulasm-s-; 'Scientists warned against this pandemic in 2007: China is a ticking time-bomb ready to explode due to its food culture', 18.03.2020, https://tr.euronews.com/2020/03/18/bilim-insanlar-2007-de-salg-na-kars-uyarm-s-yemek-kulturunden-dolay-cin-patmaya-haz-r-bo

3 Republic of Turkey Ministry of Health, COVID-19 Information Platform, https://covid19.saglik.gov.tr/ (visited on 31 March, 2021). https://www.haberturk.com/il-il-risk-haritasi-1-nisan-turkiye-risk-haritasina-gore-dusuk-orta-yuksek-ve-cok-yuksek-riskli-iller-3024604, (visited on 1 April, 2021). https://www.cnnturk.com/turkiye/il-il-koronavirus-risk-haritasi-31-mart-2021-illerin-renk-kodu-haritasi-degisti-mi-haftalik-koronavirus-vaka-sayilari-artan-azalan-iller, (visited on 31 March, 2021).

4 http://www.gazetevatan.com/turkiye-risk-haritasi-aciklandi-mi-15-28-mart-illerin-koronaviru-1379108-gundem/, (visited on 15 March, 2021).

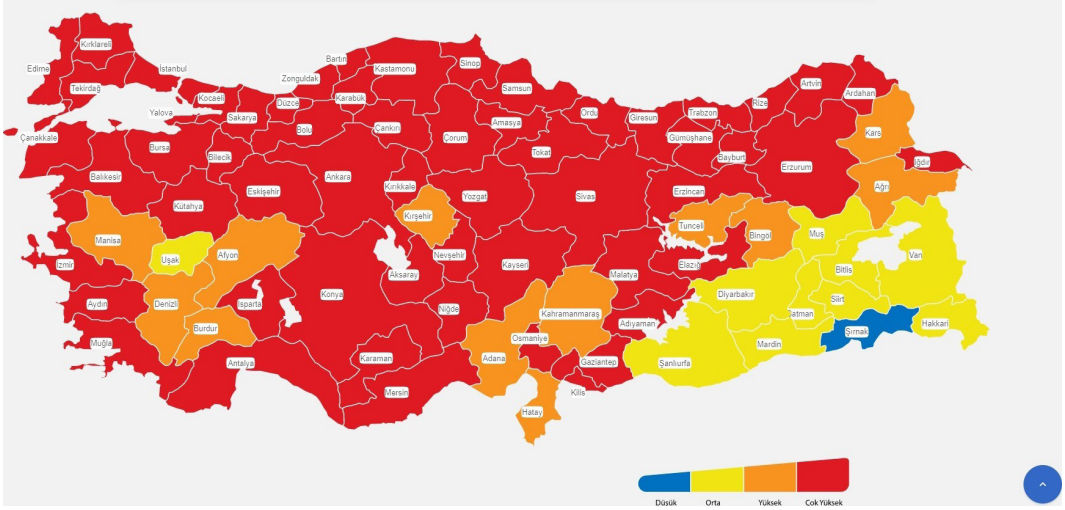


Figure 1. Risk Status by Provinces (20-26 March 2021)
(Republic of Turkey Ministry of Health COVID-19 Information Platform, https://covid19.saglik.gov.tr/, visited on 31 March 2021)

Table 1. TURKEY COVID-19 PATIENT TABLE (March 31, 2021)
(Republic of Turkey Ministry of Health COVID-19 Information Platform, https://covid19.saglik.gov.tr/, visited on 31 March, 2021)

TÜRKİYE COVID-19 HASTA TABLOSU 31 MART 2021	BUGÜN	BU HAFTA	TOPLAM
	TEST SAYISI 240.012	HASTALARDA ZATÜRRE ORANI %3,6	TEST SAYISI 38.578.057
	VAKA SAYISI 39.302	YATAK DOLULUK ORANI %54,2	VAKA SAYISI 3.317.182
	HASTA SAYISI 1.401	ERİŞKİN YOĞUN BAKIM DOLULUK ORANI %63,2	VEFAT SAYISI 31.537
	VEFAT SAYISI 152	VENTİLATÖR DOLULUK ORANI %27,1	AĞIR HASTA SAYISI 2.082
	İYİLEŞEN SAYISI 19.193	ORTALAMA TEMASLI TESPİT SÜRESİ 9 SAAT	İYİLEŞEN SAYISI 3.014.226
		FİLYASYON ORANI %99,9	

The current data on '#nothoarding/#hoarding' and '#spreadofthevirus' networks was not observed in the analysis period. In addition, networks in the form of '#waste', '#fear', and '#protection'

were excluded due to their broad discourse and not directly referring to the new type of Coronavirus. *NodeXL* software is used for data collection and analysis.

1979 tweets were posted on Twitter's trending topics in Turkey with the hashtag #evdekal (stay at home) between 22-30 March, 2021. Among these tweets, 1,026 connections have been established between 1,158 actors in total. This shows that although the number of actors in the network is high, the number of connections between actors is low.

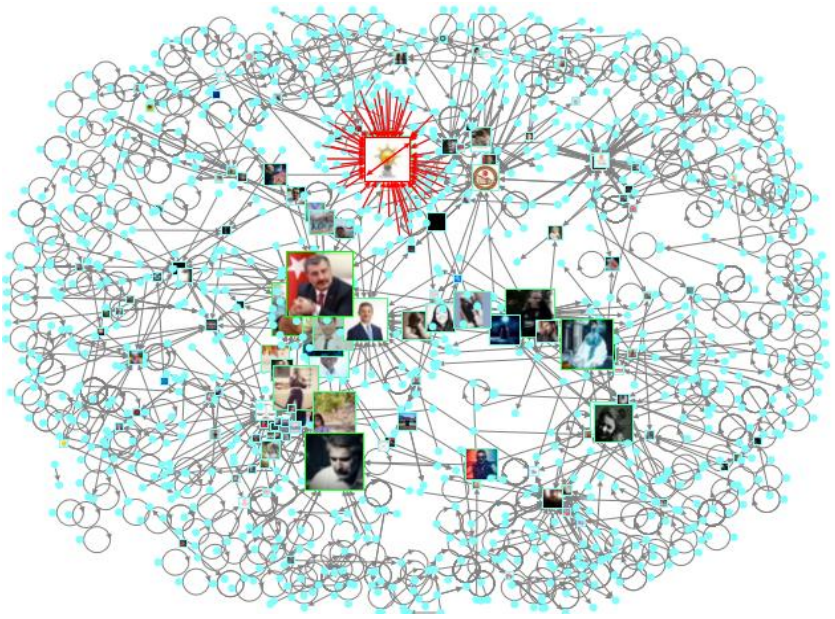


Figure 2. Measures of centrality among the #evdekal hashtag

As shown in Figure 2, the values of the centrality of the #evdekal hashtag and the dominant actors in the network are shown. While the average spacing center value of the network is 36,423, the maximum value is 3,640,000. This shows that information dissemination within the network is effective. The dominant actor in the network is the official Twitter account of the ruling party in Turkey; the Justice and Development Party (AK Party). The AK Party's official Twitter account assumes the position of the dominant actor in the network with its tweets through this hashtag, and benefits from certain interactions, such as retweets, likes, mentions, and replies. The second dominant actor after the AK Party is the Minister of Health in Turkey, Dr. Fahrettin Koca. The Minister of Health ensures the connection and interaction between the clusters that are separated from each other with his dominant position as an actor within the network.

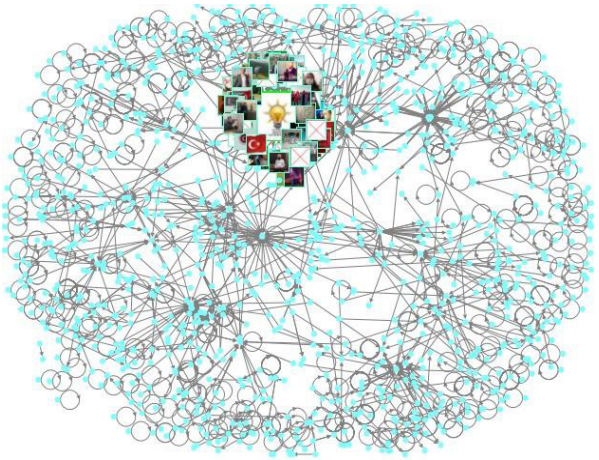


Figure 3. Eigenvector analysis of the #evdekal hashtag

While the Eigenvector Centrality value, which measures the prestige (power, reputation) of the actors in the network, is found to be 0.001 on average, the AK Party official Twitter account, which is the dominant actor in this network, constitutes the highest value of the network with an Eigenvector Centrality value of 0.081. This situation shows that the AK Party is the most prestigious actor in this network (See Figure 3).

397 tweets were posted on Twitter's trending topics in Turkey with the hashtag #hayatevesigar (life fits into the home) between 22-30 March, 2021. This shows that the network was not busy in the previous week. Among these tweets, 201 connections have been established between a total of 261 actors. This shows that although the number of actors in the network is high, the number of connections between actors is low.

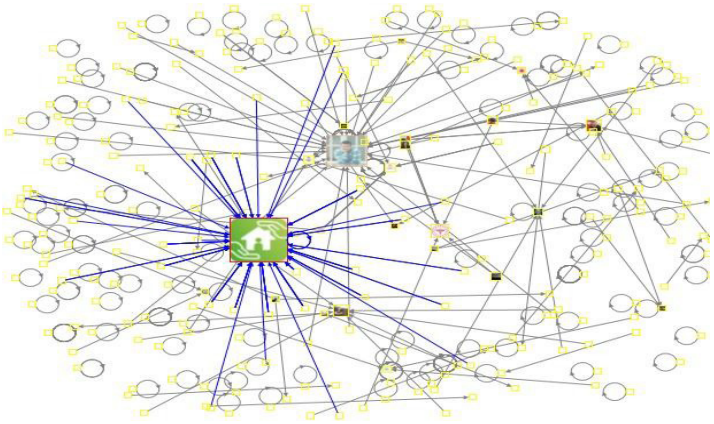


Figure 4. Measures of Centrality among the #hayatevesigar hashtag

The network's average Betweenness Centrality value is 6,973, while the maximum is 992,000. This shows that information dissemination within the network is effective. The dominant actor in

the network is the[1] Twitter account of the 'Life Fits into Home' application. The tweets shared by this account provide the connection between the nodes that are separate from each other through interaction (See Figure 4).

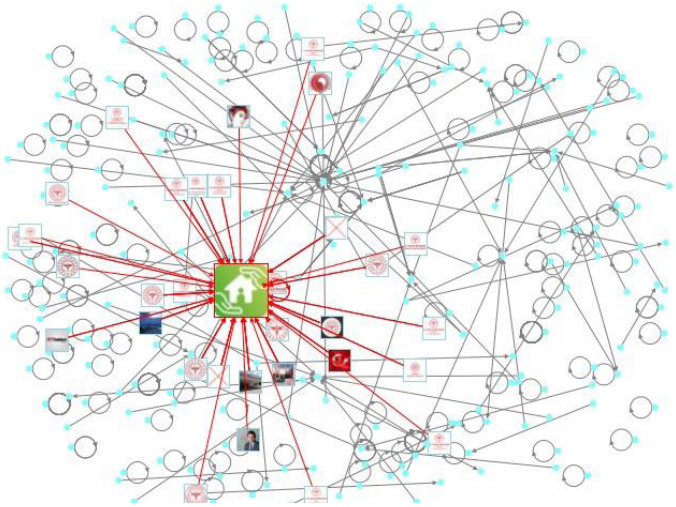


Figure 5. Eigenvector Centrality of the #hayatevesigar hashtag

The Eigenvector Centrality value, which measures the prestige (power, reputation) of the actors in the network, was found to be 0.000 on average, while the Twitter account of the 'Life Fits into Home' application, which is the dominant actor in this network, constitutes the highest value of the network with an Eigenvector Centrality value of 0.162. This shows that the 'Life Fits into Home' account is the most prestigious actor in this network. Furthermore, the accounts with which the account interacts are mostly the Twitter accounts of health institutions and organizations (See Figure 5).

PART II:

We have seen, in this study, how images can be used to spread messages to people and the impact they might have on their beliefs and actions. Strange as it might seem, many people show hesitancy about getting vaccinated—even when doing so may save their lives—and there are some segments of the population in every country that refuse to consider being vaccinated. In the United States, there are some groups, known as anti-vaxxers, who refuse vaccinations for everything and there are others, generally members of the Republican Party, who refuse to get vaccinated due to their political beliefs.

1 'Hayat Eve Sığar' (Life Fits into Home) application is a mobile application developed by the T. R. Ministry of Health. With the application, citizens can see the risk and disease intensity in the region they live in, or where they want to go to on the map. The application shows the places that need to be known in case of urgency such as risk intensity, hospitals, pharmacies, and markets to the citizens. With the smart algorithms developed, citizens who can add their families or relatives to their lists, and with the approval of their relatives can ensure that they stay away from risky areas. While the daily coronavirus table can be seen on the application, the HES Code used during travel can also be obtained from the application. (https://hayatevesigar.saglik.gov.tr/HES.pdf, visited on: 31 March, 2020).

Reaching and convincing people to "do the right thing" as far as protecting themselves and others is a challenge for government officials in all countries involved in public health programs to encourage vaccinations and behavior that avoids the risk of getting sick or dying from exposure to the virus.

That is where images become important, because, as has been pointed out earlier, images generate emotional responses in people. One need only consider two events whose images played a major role in American society and politics: the murder of George Floyd by a policeman, which was videotaped and which shocked the nation, and the events of January 6th, 2021 when a mob attacked the United States Capitol. So images are very important and were used by Turkish authorities in many ways to attract the attention of the Turkish public and convince them, it was hoped, to be vaccinated.

Semiotics, the science of signs, is based on the work of the Swiss linguist, Ferdinand de Saussure, who called his science semiology—literally, words about signs, and the American philosopher Charles Sanders Peirce. Saussure offered an important insight into the roles of signs in society in his *Course in General Linguistics* when he wrote: (1966, p. 16):

> Language is a system of signs that expresses ideas, and is therefore comparable to a system of writing, the alphabet of deaf-mutes, symbolic rites, polite formulas, military signals, etc. But it is the most important of these systems. A science that studies the life of signs within society is conceivable; it would be part of social psychology and consequently of general psychology; I shall call it *semiology* (from Greek *sēmeîon* "sign."). Semiology would show what constitutes a sign, what laws govern them.

Semiotics takes its name from the Greek word for sign, semeion, and is the term used by Peirce and by most scholars involved in the study of signs. A sign is anything that can be used to stand for something else. As Umberto Eco, the Italian novelist and semiotician reminds us, signs can be used to lie as well as tell the truth. As he explained in *A Theory of Semiotics* (1976b, p. 7):

> Semiotics is concerned with everything that can be taken as a sign. A sign is everything that can be taken as significantly substituting for something else. This something else does not necessarily have to exist or actually be somewhere at the moment in which a sign stands for it. Thus semiotics is in principle the discipline of studying everything which can be used to lie. If something cannot be used to tell a lie, conversely it cannot be used "to tell" at all.

He also reminded us that people often aberrantly decode the messages they receive, which makes communicating with people extremely difficult.

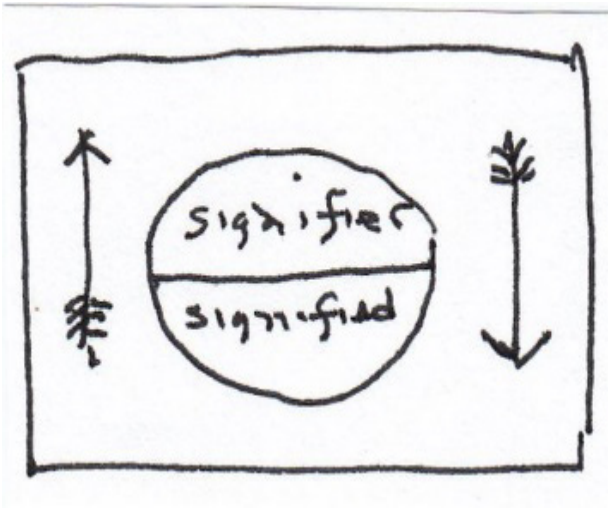


Figure 6. Signifier/Signified Relationship. Berger, after Saussure.

According to de Saussure, a sign has two components: a signifier (a sound or object) and a signified (the concept generated by the signifier), and the relation between signifier and signified is arbitrary and based on convention, which means that the meaning of signs can change. Peirce wrote many volumes about semiotics. For our purposes, his discussion of three different kinds of signs: icons, which signify by resemblance; indexes, which signify by cause and effect; and symbols, whose meaning has to be learned, is important since it covers the different kinds of signs and images to which most people are exposed. He wrote (cited in Zeman, 1997, p. 30):

> Every sign is determined by its objects, either first by partaking in the character of the object, when I call a sign an *Icon;* secondly, by being really and in its individual existence connected with the individual object, when I call a sign an *Index*; thirdly by more or less approximate certainty that it will be interpreted as denoting the object, in consequence of a habit (which term I use as including a natural disposition), when I call the sign a *Symbol.*

He added that a sign "is something which stands to somebody for something in some respect or capacity" (Zeman, 1997, p. 27) which puts people in the center of things as far as understanding and reacting to signs. The passages by Saussure and Peirce give us central concepts for dealing with signs. We must also recognize that people need to know certain codes to understand the meaning of signs.

Daniel Chandler, a semiotician, explains the relationship between signs and codes (in *Semiotics: The Basics*):

> Since the meaning of a sign depends on the code within which it is situated, codes provide a framework within which signs make sense. Indeed, we cannot grand something the status of a sign if it does not function within a code…The conventions of codes represent a social dimension in semiotics: a code is a set of practices familiar to users of the medium operating with a broad cultural framework…When studying cultural practices, semioticians treat as

> signs any objects or actions which have meaning to the members of a cultural group, seeking to identify the rules or conventions of the codes which underlie the production of meaning within that culture.

We find, then, that one must have a certain amount of background knowledge and information, what Chandler calls codes, to be able to interpret signs correctly. One reason that people may interpret signs in an aberrant manner is that they do not know the codes needed to make sense of the signs. They do not how to interpret a signifier correctly either because of a lack of knowledge or incorrect thinking.

We can understand, now, why some images fail to work the way they are supposed to work—because viewers misinterpret the images because they lack the codes necessary to make a correct interpretation. If there's any ambiguity in a sign, we can say it is ripe for aberrant decoding. There is also the matter of metaphorical thinking to be considered. Many people believe that metaphor is a linguistic device mainly found in poetry, but as Lakoff and Johnson explain, that is not the case. As they explain in *Metaphors We Live By* (1980, p. 3):

> Metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphoric in nature. The concepts that govern our thought are not just matters of the intellect. They also govern our everyday functioning, down to the most mundane details. Our concepts structure what we perceive, how we get around in the world, and how we relate to other people. Our conceptual system thus plays a central role in defining our everyday realities. If we are right in suggesting that our conceptual system is largely metaphorical, what we experience and what we do every day is very much a matter of metaphor. The concepts that govern our thoughts are not just matters of the intellect. They also govern our everyday functioning, down to the most mundane details. Our concepts structure what we perceive, how we get around in the world, and how we relate to other people.

They also deal with metonymy, which is not based on analogy, like metaphor, but on association and is referential, in nature. But also plays a role in shaping understanding. Advertisers make use of metonymy to influence people and to make use of associations they have in their heads, as part of what we call "background knowledge," to communicate ideas and attitudes, so they don't have to spell everything out in detail. We must recognize that metaphors and metonymies can take the form of visual images, and the images used by the Turkish authorities take advantage of the associations in people's heads in trying to persuade people to stay at home and avoiding the virus.

Aristotle explained, in his Rhetoric, many thousands of years ago, that there are three ways to persuade people:

> Of the modes of persuasion furnished by the spoken word, there are three kinds. The first kind depends on the personal character of the speaker; the second on putting the audience into a certain frame of mind; the third on the proof, or apparent proof, provided by the words of the speech itself.

What he said about rhetoric applies also to the rhetoric of images, which persuade us by:

Ethos: the credibility and personal character of the sender of the image

Pathos: the ability of the image to stir up strong emotions in its viewers

Logos: the logic of the arguments inherent in the image

What Aristotle called Ethos is essentially an appeal to authority. What he called Pathos is the power of images to have an emotional impact on viewers of the images. His Logos involves the logic of an argument and which can be found in images with charts, which show viewers things like how many people have been exposed to the virus or have died from catching the virus.

The images found in the first part of this study rely on the credibility of the Turkish government (Ethos), the power of the images in the campaign to resonate with those exposed to these images (Pathos) and the information conveyed in certain kinds of images, namely the charts (Logos). However, because of what Eco (1976b) called "aberrant decoding," by which he meant the way receivers of information—in this case, images—don't interpret the images correctly or because in many cases, the images do not have the persuasive impact their creators expect, the campaign to get people to protect themselves, or get vaccinated when this is possible, are not as effective as one might expect. The images found in this paper are often striking and really brilliant, but they cannot convince everyone to be careful and avoid of being exposed to the virus.

In the United States, the Federal Government and many states are now offering lotteries, with huge payouts to convince people to get vaccinated. Getting vaccinated becomes, in essence, the equivalent of purchasing a lottery ticket, and these lottery campaigns seem to be effective in persuading reluctant Americans to get vaccinated. The images that are functional with lotteries are of dollar bills and huge payouts to the winners of the lotteries.

Daniel Chandler argues, in his book *Semiotics: The Basics* 3rd Edition, that metaphors can use images. He writes (2017, p. 153):

> Metaphors need not be verbal. In the film, a pair of consecutive shots is metaphorical when there is an implied comparison of the two shots…. Advertisers frequently use visual metaphors. Despite the frequently expressed proposition that images cannot assert (or negate), metaphorical images often imply that which advertisers prefer not to make verbally explicit.

He adds, in his discussion of metonymy (2017, p. 157):

> As with metaphors, metonyms may be visual as well as verbal. Metonym is widely employed in advertisements in which the implicit proposition is that buying the product is a way of buying the lifestyle with which it is associated.

In the case of the images used in the Turkish campaign, the government was not selling a lifestyle but life, itself. Some images are universal and can be understood by anyone, but many images and the signs found in them are culture-specific and rely on the background knowledge on the part of those seeing the image to be able to react to it in the desired manner. If you didn't know that people

hoarded toilet paper when the pandemic struck, the image of rolls of toilet paper in a field, shown in one of the images, wouldn't make any sense.

Semioticians also deal with two rhetorical devices connected to metaphor and metonymy, namely simile, which is a weaker form of metonymy that uses "like" or "as" and synecdoche, which is a form of metonymy in which the whole is represented by the part.

Thus, saying "my love is a red rose" is an example of a metaphor while saying "my love is like a rose" is an example of a simile. An example of synecdoche would be using "the crown" to stand for a king or the Pentagon to stand for the U.S. military establishment. It is important to recognize that people use many metaphors and metonyms in their daily conversations and that the visual forms of these devices have the power to strike a responsive chord in people.

A theorist of communication, Tony Schwartz, developed a theory of communication that argues that the transfer of meaning from texts to people is based on what he calls a responsive chord. He explains, in his book, *The Responsive Chord* (1974, p. 24-25):

> Many of our experiences with electronic media are coded and stored in the same way they are perceived. Since they do not undergo a symbolic transformation, the original experience is more directly available to us when it is recalled. Also, since the experience is not stored in a symbolic form, it cannot be retrieved by symbolic cues. It must be evoked by a stimulus that is coded the same way the stored information is stored. The critical task is to design our package of stimuli so that it resonates with information already stored within the individual and thereby induces the desired learning or behavioral effect. Resonance takes place when the stimuli put into our communication evoke *meaning* in a listener or viewer.

What we learn from Schwartz is that one reason images are so functional is that they connect with information already stored in the minds of the receivers of these messages. So these images aren't transferring new information to their viewers but striking a responsive chord with information already known and stored in the minds of viewers.

In the United States, it has been found that people, on average, spend around thirteen hours a day with media. They watch television for four hours, listen to the radio for two hours, are involved with digital media for six hours, and read newspapers for around nine minutes. This means that the attempts to attract the attention of the American public—and probably the statistics for the Turkish public are not that different—have to deal with a kind of information overload in the minds of the American public. Approximately one hour of the four hours of television is devoted to commercials so there is a ferocious competition to attract the attention of the average person for any purpose. The average person in America is exposed not only to commercials on television and radio but to thousands of images selling things on billboards, on the Internet, on wherever—so it seems—there is a blank space. This means public service announcements have to battle with all the commercials and print advertisements to gain attention. We all live in what has been described as a visual culture in which we spend enormous amounts of time processing images of all kinds.

Marshall McLuhan distinguished between print media and electronic media. Print media are linear (think of the pages of a book), based on logic and rationality while electronic media is all-at-once and emotional (think of listening to the radio or watching television). In a world in which so many people spend relatively little time with print media and spend hours and hours a day with electronic media, campaigns based on images in print have to struggle to be seen and to make an impact.

One way campaigns such as the one in Turkey discussed above to fight for attention involves using striking symbols in images that convey information directly and immediately and are easily understood. But this is not as easy as it might seem since there is always the matter of aberrant decoding by viewers of the images and of the suppression in the minds of people exposed to the public service announcements who do not wish to be convinced that a suggested kind of behavior should be followed, even if it is based on scientific knowledge.

It is difficult to overcome the resistance of people who, for one reason or another, refuse to behave in rational ways and, in the case of the virus, risk their lives and endanger the lives of others by their behavior. In the United States, the government used scientists, celebrities (such as the coach of the Alabama football team as well as actors and actresses) to persuade people to get vaccinated, with some success. But there are a large number of people who refuse to wear a mask, let alone get vaccinated. That explains why in the United States, the Federal government and many state governments have changed their campaigns recently and have used lotteries and the hopes and fantasies people have of becoming millionaires or winning lots of money just by getting themselves vaccinated. The images that people have in their minds of becoming rich or, in some cases, winning prizes of one kind or another (free beer, tickets to sporting events, etc.), are more potent than the images found in government-sponsored public service campaigns meant to generate desired behaviors in the general public.

Political scientists have argued that people vote based on their self-interest, but what we have found is that people don't know what their self-interest is and in some cases, even if they recognize that some form of behavior is in their self-interest, refuse to behave in a rational and socially responsible way. That explains why campaigns about the virus rely on hoped-for emotional responses to the images to which they send to people; emotional responses that will lead to rational behavior. The difficulty of getting people to do what you want them to do—whether it involves staying home, wearing a mask, getting vaccinated, or drinking a glass of Coca-Cola—explains why the advertising industry is so gigantic and all-pervasive. Advertising agencies don't expect to get everyone to buy the products and services they are selling. Just getting a certain percentage of people to behave the way the advertising agencies want them to is enough. In the same light, if the campaign run by the Turkish government persuaded some people to behave responsibly, that, in itself, would be a major accomplishment.

The question we must ask is whether the Turkish campaign, or the campaign in the United States, or the campaigns in any country convinced people to act in a certain way or whether these

campaigns were, as we say in the United States, "preaching to the choir." In his book, *Interpreting Advertisements: A Semiotic Guide,* Marcel Danesi writes (1995, p. 14):

> In my view, even though people mindlessly absorb the messages promulgated constantly by advertising, and although these may have some subliminal effects on behavior, we accept media messages by and large, only if they suit our already established preferences. It is more accurate to say that advertising produces images that reinforce already-forged lifestyle models in individuals.

As they say in the advertising world, "you can raise the flag but not everyone will salute."

Conclusion and Evaluation

The COVID-19-themed visuals analyzed in the study have a metaphorical discourse, and the allegories are intended to develop behavior. Additionally, the suggestions, such as not being wasteful, not hoarding, and the images frequently used by the authorities, especially at the initial phase of the pandemic, also depict the discourse on staying at home and symbolize a holistic visual struggle against the pandemic. It can be seen that the concepts of hoarding/not hoarding, wasting, and a sharing culture are generally processed through consumption (food) objects. This is because no matter how the process is experienced, consumer society is a global phenomenon. The analyzed designs reveal that powerful visuals, symbols, and expressions are known to individuals during the pandemic. This process may have aimed to develop and address the collective memory. The calls for precaution are noteworthy in the visuals detailed by metaphorical expression.

The networks on Twitter, in Turkey, related to the themes '#evdekal' (stay at home) and '#hayatevesigar' (life fits into the home) are also examined in the study. Considering the general distribution of the #evdekal and #hayatevesigar hashtags on Twitter in the analyzed date range (22-30 March, 2021), the fact that the actors dominating the network are a political party, health application, and the Minister of Health suggests that an important situation, such as that the course of the pandemic, does not evoke a response from the public. Just as the number of connections between the dominant actors in the networks is low, so too is the density of the networks. This situation shows that tight connections cannot be established between different networks. Of course, it should be considered that only the results of an analysis made over a short period of time are examined here. It is important to conduct studies that examine the current situation in social networks in more detail.

As a result of the study, it was important that the visuals examined are designed to develop behavior and raise awareness during the COVID-19 pandemic. It can also be asserted that a visual struggle against the pandemic is fought through metaphorical expression. The visuals, which are successful in memorability and attractiveness, draw attention to making the invisible virus cognitively visible and, therefore, avoiding it constantly. The use of signs, most of which are universal, appealing to the collective memory was important in terms of giving clarity to the messages to be conveyed. While semiotics allows the relevant visuals to be made sense of, it once again pointed to the visual's impact potential and power of persuasion. It should be noted that it is not always easy to persuade individuals to act in their self-interests. Here, the question of whether advertisements and campaigns

affect people's behavior is important. On the other hand, considering that the visuals examined in the first part of the study are not completely convincing, it should be considered that the effect expected by the creators because the behavior of individuals may be different. Although it has been observed that the images/designs examined in this study are quite remarkable and stimulating, it can be said that the relevant images cannot convince everyone to be careful and avoid exposure to the virus. It was important that the network analysis carried out within the scope of the study tried to bring out the pandemic agenda of individuals through the hashtags examined. Emphasizing that it was specific to the review period, it was remarkable that the course of the pandemic did not arouse a public reaction. Another important data was, the observation that tight connections between different networks cannot be established. The presence of the government party and the Minister of Health in the relevant networks is also important for public opinion and interaction.

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Dogan Celebi was an independent designer, art educator when he designed the visuals which analyzed in the first part of the study. Celebi started to work as a lecturer in the Department of Design at the Technical Sciences Vocational School of *Hitit University* on April 6, 2022. E-Mail: dogancelebi@hitit.edu.tr

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