

Advertising and Ethics:

Theme and Community Segregation on Chicago's Rapid Transit System

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This paper was supported in part by a grant from the Loyola Undergraduate Research

Opportunities Program.

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Abstract

Home to the United States' second-largest public transportation system, Chicago has a long history with economic, educational, and racial disparities amongst its 77 neighborhoods. Through content analysis, this study examines and categorizes 1,048 advertisements by their community demographics such as education, income, and race, to examine theme variance within the context of residential segregation on Chicago's rapid transit rail system.

Keywords: advertising, ethics, outdoor advertising, residential segregation, marketing and society, Maslow's Hierarchy, rapid transit

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In *The Current State of Advertising Ethics: Industry and Academic Perspectives*, Minette E. Drumwright and Patrick E. Murphy's research centers around the disconnect between industry and academy in terms of the approach towards advertising ethics. From an academic position, there has been controversy in the industry's handling the social communication power that comes with advertisement creation. Some scholars, like Jerry Kirkpatrick, believe that Randian theory is the underlying foundation that drives manipulation, deception, and coercion through advertising business decisions. In response to this rhetoric, the Catholic Church's Pontifical Council for Social Communication published *Ethics in Advertising*, which encouraged industry to realign their principles and ground advertising content in the pillars of truthfulness, human dignity, and social responsibility. Regardless of religious affiliation, these guiding pillars are applicable in both traditional and digital media, especially as the pioneering of digital advertising and the integration of Big Data into digitized out-of-home and programmatic ad purchasing has yet to see comparatively stringent regulation as its traditional counterparts.

Irrespective of the desired career path, both ethics and psychology are core curriculum components for advertising and marketing students. Several models are incorporated early on in intro courses, one of which is Maslow's Hierarchy of Needs. By using Maslow as a model, it allows students to compartmentalize and prioritize consumer behavior into five potential motivations or needs: physiological, safety and security, love and belonging, self-esteem and self-actualization (Maslow, 1954). Each of these five categories can be used to define values and connect them to specific products and services when advertising in order to best align with the needs and wants of the desired or targeted consumer.

The goal of this study is to determine if there is a difference in themes communicated in areas with different incomes on Chicago's Rapid Transit rail system and what values, as defined by Maslow's Hierarchy, are expressed within those themes. An inventory of Out of Home (OOH) advertising was taken in order to describe the content and prevalence within the system. By identifying themes in terms of expressed values and ad sponsor, in addition to categorizing platforms and lines by their community demographics such as race, income, and education, this study aims to examine theme variance within the context of residential segregation and contrast OOH advertising in high- and low-income areas.

Literature Review

Interaction with Impoverished Market Segments

Santos and Laczniaik (2009) have written a normative approach to ethically engaging low-income consumers known as the integrative justice model (IJM). This model pulls in elements of distributive justice and corporate social responsibility and is rooted in philosophy and theology. One of the intentions of IJM is to answer the question of what is "just" and "fair" when ethically marketing to marginal and extreme poor populations. Under this model, Laczniaik and Santos state that five parameters must be met: authentic engagement with non-exploitative intent, co-creation of value, investment in future consumption, interest in the representation of all stakeholders and focus on long-term profit management.

In the United States, there has been an increase in exploitive practices that are directed at low-income market segments and advertised in frequently accessed media channels such as predatory lending services, insurance, for-profit education, and rent-to-own agreements. These sorts of services, when placed in areas that are likely to have greater reach or frequency amongst impoverished market segments, capitalize on lack of financial resources and education, and can

inherently exploit consumers. This awareness in conjunction with elements of Rawls' difference principle, Habermas' discourse theory, Ross' theory of duties, and Sen's capability approach all lend to the idea that a framework for ethical engagement with the poor must be considered at all cost when marketing and advertising a product (Laczniak & Santos, 2011).

Residential Segregation

In *From Modern to Post-modern? Contemporary ethnic residential segregation in four US metropolitan areas*, earlier research was combined to create a comprehensive picture of residential segregation in the city of Chicago. Under a pluralist model, segregation of ethnic groups is prolonged and prevalent with two variations in presentation: involuntary and voluntary (Poulsen, Forrest & Johnson, 2002).

Voluntary is when the majority of an ethnic group choose to remain residentially separated from the “host society” and is often referred to as “enclaves.” Conversely, involuntary refers to ghettos, or “involuntary spatial concentrations of those at the bottom of a hierarchy of power and wealth, usually confined on the basis of ascribed characteristics such as color or “race” (Marcuse, 1997).

As of 2002, 75% of Blacks live in census tracts with a Black majority with 60% of tracts containing at least 80% Blacks, within Chicago. Whites are almost equally segregated, with 89% living in communities that lack ethnic diversity (Poulsen et al., 2002). Due in part to legislative redistricting, the city saw a rise in mortgage redlining and school redistricting before and during the Great Migration, or the migration of an estimated 6 million Blacks to urban centers outside of America's South between 1910 and 1970(The Website Services & Coordination Staff, n.d.). This history coupled with deindustrialization within Chicago, particularly the closure of Acme Steel, the General Mills cereal plant, and U.S. Steel's South Works, has maintained Chicago's

racial and ethnic segregation (Sellers, 2006). To date, the city contains substantial concentrations of White populations around the north and northeast, Blacks on the south side, Asian Americans in the center and Latinos on the west side (Prosperity Now, 2017).

Not only are these groups physically separated, but income and education disparities are distributed as well. As of 2017, the median income was “\$70,960 for Whites compared to \$56,373 for Asians. Both of these communities perform better than Blacks at \$30,303 and Latinos at \$41,188” (Prosperity Now, 2017). In terms of education, 14% of Latinos, 18% of Blacks, 58% of Asians and 59% of Whites within Chicago have completed a bachelor’s degree or higher compared to 14% of Latinos, 19% of Blacks, 33% of Whites and 50% of Asians nationally (Prosperity Now, 2017, p. 8, 12).

As identified in *Ghettoizing Outdoor Advertising: Disadvantage and Ad Panel Density in Black Neighborhoods*, in terms of OOH billboard advertising, Black neighborhoods across the United States are disproportionately targeted in contrast to White communities. Kwate and Lee specifically note that two studies conducted in Chicago found almost twice the number of alcohol and tobacco billboards in predominantly Black and minority communities (Hackbarth et al., 2001; Hackbarth, Silvestri & Cospers, 1995).

Additionally, these areas in addition to more impoverished communities are frequently seen as culturally inferior, and this stereotype can influence the content selected by advertisers to place in these neighborhoods (Kwate & Lee, 2007).

Transit and OOH Advertising

The CTA explicitly prohibits specific advertising content such as; political promotion, issues of public debate (economic, political, religious or social), tobacco, adult/mature rated films, television or video games, adult entertainment facilities or services, nudity, sexual

conduct, sexual excitement, illegal activity, profanity, violence, firearms, disparaging content.

While the CTA is clear that they prohibit material that "the sponsor reasonably should have known false, fraudulent misleading, deceptive, or would constitute a tort of defamation or invasion of privacy," and "any material that is so objectionable under contemporary community standards as to be reasonably foreseeable that it will result in harm to, disruption of or interference with the transportation system," but these are subjective and open to interpretation.

The question is, are there ads that occur in low-income areas that offer products and services that do not directly violate these policies but instead dance on the line and could be perceived as exploitative or unethical? (Chicago Transit Authority Advertising Ordinance, 2013).

In *Alcohol and Cigarette Advertising on Billboards; Targeting with Social Cues*, this research draws from the social cognitive theory in that consumers will attempt to emulate and model their behavior after rewards that are depicted in advertisements (Schooler, Basil, & Altman, 1996). Be it depictions of social rewards or symbols of success, similarity or attractiveness, the modeling of these social cues, particularly in billboards in their study, will elicit positive results; reward cues were categorized as romance, sociability and friendship, recreation and vacationing, sportiness and active lifestyle and adventure or risk (Schooler et al., 1996). In their findings, it was noted that there was a difference in the prominence of reward cues depicted; in White communities, it was sportiness and active lifestyles whereas in Black communities it was romance (Schooler et al., 1996).

In order to identify the prevalence of advertisements that individuals were incidentally exposed to while waiting for the subway, Marvin D. Fullwood (2018) conducted a descriptive study of transit advertising containing alcohol and violence on New York City's rapid transit system. This study centers on incidental exposure, which entails encountering ads in passing without deliberately interpreting the content and messaging. Fullwood also examined the socio-

economic makeup of areas with a higher number of occurrences while touching on the ethicality of targeting vulnerable populations. This study documented over 9,000 advertisements in 143 stations of the 472 observed. Fullwood found that of those 143 stations where advertising occurred, 53.1% of them had ads where alcohol was present while one of 10 advertisements had violent content. Additionally, it was determined that alcohol advertising occurred more frequently in areas where there was a larger Black population (Fullwood, 2018).

Mass Transit and Chicago

As the operator of the second most extensive public transportation system in the United States, the Chicago Transit Authority (CTA) is responsible for operations of 8 routes that are made up of 145 stations on 224.1 miles of trackage with 86.7% of Chicagoans encountering transit media. The Red Line is the busiest on the system, offering Night Owl or 24/7 service to 33 stations over 21.8 miles. This route travels from the south side to the north side of the city, via downtown or the Loop. In addition to running service between Howard and 95th/Dan Ryan, the CTA offers additional weekday rush period service between Howard and 63rd and Ashland utilizing the Green Line trackage between Cermak/McCormick Place and Ashland/63rd. After the Red Line, the Blue Line is the second busiest route in the system and includes 33 stations over 26.93 miles, traveling from the far northwest through to Loop and down to the southwest side. The Brown Line also provides service coverage in the northwest part of the city, via the Ravenswood and Albany Park neighborhoods, with 27 stations on an 11.4-mile route towards the Loop.

The Green Line, comprised of 30 stations on a 20.69-mile route from the West Side to the South Side, West Englewood, and Woodlawn via the Loop is the only entirely elevated line in the system and includes some of the older portions of the CTA. In order to provide access to the Southwest Side of the city, from the Loop, the Orange Line includes 16 stations on a 12.5-mile

route. As the newest line in the system, the Pink Line offers service from the Loop to the southwest suburb of Cicero and includes 22 stations on an 11.2-mile route. The northern suburbs of Wilmette and Evanston are accessed via the Purple Line from Howard station where the Red Line terminates. Outside of weekday rush hours, this 3.9-mile route includes nine stations, however, during peak periods it is expanded to include a total of 26 stations on a 14.2-mile route, which extends to the Loop. The Yellow Line, also known as the Skokie Swift, a name that predates the adoption of the colorized naming system, provides service to the northern suburb of Skokie. With only two stations, aside from its terminus at Howard Station, this route covers 5.1-miles.

In addition to the previously mentioned lines, some stations serve multiple lines, especially in the Loop or during peak weekday rush hours or serve as transfer points, notably Howard, which is a terminus for three lines; Red, Purple, and Yellow(Chicago Transit Authority, 2017).

Under CTA Board Ordinance No. 013-63, the CTA outlines their advertising and policy guidelines. The CTA is clear that advertising revenue generated is an "additional source" which "supports transit operations"; the initial operating budget of the CTA is derived from federal, state and local funding, grants, taxes, and farebox revenue. To a degree, this allows the authority to be more selective of who is allowed to run ads and what ads are allowed through an independent media planner as the funding burden is not reliant upon that revenue (Chicago Transit Authority Advertising Ordinance, 2013).

While the guidelines are clear that advertising must increase and maximize revenue, maximize ridership while maintaining a non-discriminatory environment free of claims of that

nature and refrain from controversial and offensive advertising, the policy is more flexible when it comes to potentially predatory or exploitative content.

One of the benefits of mass transit is that it makes cities livable while shaping and constraining both opportunity and socio-spatial relationships. Like the medium itself, advertising on trains can do the same. In many instances, particularly in low-income, working-class or communities with large people-of-color or immigrant populations, these services see many cut-backs and impact enclaves and ghettos that are heavily dependent on transit to facilitate essential travel. In some instances, these cut-backs even lead to the CTA disregarding their own rules regarding spacing guidelines between stations and decommissioning platforms in working-class, Black communities such as the Dorchester stop on the Green Line in 1997. While increasing the distance between stops from between a half-mile to a maximum of one mile to over 1.5 miles in some cases may be more of an urban planning related social justice concern, these changes have the ability to dramatically shift target audiences from one station to another, reinforcing the need to have persuasive advertising on the interior of cars in order to improve both reach and frequency (Farmer & Noonan, 2014).

Research Questions

Based on the literature mentioned above:

RQ1: What themes/values are communicated in areas with different race/ethnicity, education, and income?

RQ2: Is there a correlation between race/ethnicity, education, and income and prevalence of specific themes?

Methods

Collection Planning

Currently, advertising on the CTA can be categorized into three locations: stations, street, and trains. For many advertisers, utilization of interior car cards is a more cost-effective means of reaching audiences, whereas the platform 1-and 2-sheets (46”h x 30” w or 46”h x 60” w) and urban panels at station entrances on street level require a more substantial financial commitment. In many instances, advertisers run station platform ads in conjunction with an interior train car presence.

The advertising layout of the interior of the CTA's 5000-Series rolling stock train car was examined in addition to several islands, dual island, side-platform, and dual side-platform stations on elevated, at-grade and subway lines and station entrances during the preliminary planning stages. The researcher observed that in many instances, larger brands maintained both an interior and exterior presence, which improved reach and frequency.

During the literature review, M.D. Fullwood's (2018) dissertation, *Transit Advertising with Alcohol and Violent Content on Public Platforms: A Descriptive Study of Advertisements Within the New York City Subway System*, was identified as a comparative study. Fullwood's work was used as a point of comparison for upholding or rebuking approaches to data collection of transit platform advertising.

Data management was an area of concern during the early planning stages of collection methods. Fullwood utilized the app Fulcrum when documenting ads that pertained to drinking on the MTA. Fulcrum requires a small subscription fee but allows for photographing, back up, location and note-taking ability while minimizing the need for a comprehensive understanding of programming language. Lastly, Fullwood's method of first riding the entire transit system to

identify stations that lacked advertising to be excluded from future data collection trips was considered in this study as well.

In order to thoroughly organize and store the data in this study, the researcher created a collection app with Fulcrum, as done by Fullwood, which was completed in early February. Data collection from three Red Line stops, Chicago, Granville, and Morse, was completed in mid-February. These three stops were completed earlier than the rest, in order to develop and test the Fulcrum app for usability and stability, as this data could be easily replaced if necessary.

The data collection app included geographic categories for line, station, and direction of travel. Time, date, and GPS information was hardcoded into the app and documented automatically. The app also allowed the researcher to photograph each advertising occurrence, note repetition, document the brand name, add additional notes and to categorize each advertisement according to their sponsor's intention to promote a product, service or PSA message.

Data Collection and Sampling

In this study, the data collection process was divided into two phases; passive and active collection. Depending on their starting position, the researcher would ride each CTA line either from the route's terminus towards the Loop or from the Loop towards the route's terminus during the passive phase. In the case of all lines originating from Howard (Red, Purple, and Yellow), these were all ridden from terminus to terminus. During this time, the researcher observed if the platforms along that line had visible, static 1- and 2-sheet advertisements. The presence or lack thereof was indicated by either a checkmark or an 'x' next to that station's name on a paper copy of that specific line's route brochure. Stations that lacked advertising were noted but ultimately excluded when determining the sampling for the active collection phase. The passive collection

phase took approximately 6 hours to complete and was completed between March 13 and March 25, 2019.

During the active collection phase, all platform ads were photographed and cataloged using the Fulcrum app through a systematic sampling of 65 stations across all 8 CTA lines. The starting point for each CTA line sample was the northern-most terminus. Only stations that were observed as having a platform advertising presence were considered with every third station being selected for inclusion.

The eight elevated platforms in the Loop that concurrently serve the Brown, Green, Orange, Pink, and Purple Express lines were entirely excluded from sampling due to their nature in serving the city's commercial, financial and tourism core. Additionally, only 8.3% of the Loop's land is zoned as residential and was not comparable to the rest of the sample, and of those residents, 69% depend on foot, bike or car for travel (Community Snapshot-CMAP, 2019). However, subway stations for both the Red and Blue lines in the Loop were included in the sample. Lastly, due to the route length and number of platforms, the Purple and Yellow lines were included in their entirety to ensure appropriate representation of those communities.

In most cases, excepting Red and Purple lines, active collection occurred on the return trip to the Loop or terminus after completing the passive collection phase. The active collection phase took approximately 48 hours to complete between March 13 and March 26, 2019.

Sample Coding

Sponsor. Messages were reviewed for sponsor and coded as either product, service, or PSA and keyed into the Fulcrum app during active collection.

Product was defined as a tangible good that can be owned and stored. Ads that were categorized as products typically included fashion or beauty items, home décor, specific food

and beverage products such as Butcher Boy vegetable oil, Red Bull, Crown Royal or lottery tickets. In some instances, like the case of McDonald's, "all-day breakfast" was offered in the ad, but the intended outcome was to sell a tangible product that would ultimately be consumed and therefore was qualified as a product based on the result.

Service was defined as an experience or intangible asset, resource, solution, system, or utility that is accessed by leasing, contracting, or subscribing to during a set period. Ads that were categorized as services typically included medical services, telecommunication or business solutions such as cell phone and internet providers, and office suites, and cultural experiences like tours, travel or theatre.

PSA or Public Service Announcements were defined as the promotion of a message or not-for-profit or typically subsidized or free product or service that advocates or endorses adoption of healthy or improved behaviors that usually pertain to a health or social issue. Ads that were categorized as PSAs included content with topics such as anti-drunk driving, low-cost or free birth control or family planning, sexually transmitted infection (STI) prevention services, mental health services, free alternative high school education, and AARP retirement planning resources. Any ad that was noted as being sponsored by a government department such as the Ad Council or Healthy Chicago were automatically included in this category.

Themes/Values. Ads were reviewed and categorized into themes in order to examine the promoted values in OOH advertising. The value of these themes was operationalized within the context of Abraham Maslow's psychological motivation theory.

According to Maslow's Hierarchy of Needs, there are five categories of needs; physiological, safety, belongingness and love, esteem and self-actualization. Physiological and

safety needs typically satisfy necessary functions, while belongingness and esteem needs to fulfill psychological concerns, and self-actualization caters to self-fulfillment opportunities. Maslow theorizes that a desire to fulfill unsatisfied needs motivates individuals; however, progression is linear, and individuals must fulfill basic needs before being able to proceed to attend to the next psychological or self-fulfillment areas (Maslow, 1954).

Advertising themes were divided into the following categories; food and medicine, safety, legal and employment, mental, sexual and family wellbeing, medical and dental wellbeing, real estate, banking and business, social, app-centric and gaming, beauty, fashion and décor, travel and culture, and education and hobbies. Themes were based on Maslow's levels. However, they were divided or expanded to provide more context and address any observed variation between areas.

The food and medicine category was assigned to brands that promoted food and non-alcoholic drinks and medicine. These were items that provided sustenance and energy in order to exist and over-the-counter medicine to resolve ailments or simple medical concerns. Ultimately, these items pertained to the physiological needs' category of Maslow's Hierarchy, which accommodates food, water, warmth, and rest (Maslow, 1954). Examples of brand names sorted into this category included super-market, food and drug stores, food products such as McDonald's coffee, and Butcher Boy vegetable oil and Vick's cold and flu products. One instance of CenterPoint Energy's home gas subsidy program was observed and ultimately included in this category as well, as it was responsible for providing warmth.

The safety, legal, and employment category was intended to address external conditions that would be included in the safety and security level of the hierarchy. This category included personal safety devices such as pepper spray, or CTA safety technique PSAs, legal counsel, and

wanted ads that promoted opportunities to improve financial security. AARP retirement planning was included here as retirement funds provide financial security for retirees in a manner that is comparable to earning an income.

The safety and security category that was influenced by internal conditions was best divided into two categories, due to the sheer number of ads that were observed. The two categories were (1) mental, sexual, and family wellbeing, and (2) medical and dental wellbeing.

Mental and sexual wellbeing were paired together due to the number of PSAs that were released by Healthy Chicago, an affiliate with Chicago's Department of Public Health. The two PSA campaigns that are running both aim to destigmatize seeking help, testing, and treatment for mental health and sexually transmitted infections. Some of the language in the mental health PSAs touched on addressing LGBTQIA+ concerns, which indicated overlap between these topics. In selected markets, both campaigns ran in English and Spanish. Included in this category are ads for pregnancy tests, subsidized or free birth control, and women's reproductive and breast health. Lastly, family wellbeing within this category was designed to address several PSAs that promoted services of fatherhood.org, childhood mentor programs, and adoption services.

The mental and dental wellbeing category encompassed a large number of ads that promoted medical and hospital services offered by Loyola Medical Center, Rush University Medical Center, University of Illinois Chicago's Hospital and Health Sciences System, and private practice dentists. Additionally, alternative medicine ads, including yoga, were included in this category.

The real estate, banking, and business category was assigned to brands that offered banking, real estate brokering, office suite technology. Real estate products or services that were included in this category offered amenities that fulfilled wants rather than needs. The presence of

wants such as aesthetic design elements, high-end appliances, prime locations, or on-site fitness centers elevated these ads to belongingness and esteem needs categories. Housing in this category caters to a feeling of self-worth or accomplishment. Pride within social circles can result from living in a prime or preferred location (Maslow, 1954). The most common items to be assigned to this category were ads that promoted luxury lofts for lease and real estate brokerage services such as Realtor.com. Typically, in Maslow, housing, or shelter need would be qualified under either physiological or safety needs (Maslow, 1954). Ads for basic housing or PSAs offering services to homeless populations were categorized under “safety, legal and employment.”

The social, app-centric, and gaming category addressed belongingness and love needs. This category consisted mainly of telecommunication services such as cell phone (AT&T, Boost, and T-Mobile) and internet providers (RCN and Xfinity). Overall, cell phone providers used images that demonstrated the social aspects of mobile services, such as connecting individuals, whereas internet providers promoted the interactive nature of their products. The Illinois Lottery was included in this category as well, as a large number of their ads promoted the app or mentioned the group play feature. Social connecting apps or platforms, such as LinkedIn and Spotify, were included in this category as well.

The beauty, fashion, and décor category centered on the esteem needs as these are typically high-end in nature. These products are usually sought out by consumers due to the prowess of the brand name and encourage the consumer to feel a sense of prestige, self-worth, or financial accomplishment in their attainment. It included beauty products and services by brands like Aveda, high-end outdoor wear (Arc'teryx), fashion accessories (Oris watches) and custom home décor (Interior Define).

Because activities like traveling to Florida or attending the ballet can be perceived as status symbols that indicates a level of financial accomplishment to their peers, the travel and culture category was categorized as both esteem and self-actualization. Other ads that fit this category included Michigan's Upper Peninsula, concerts, opera, sports and other local cultural activities (e.g., Chicago 360).

Lastly, the education and hobbies category centered on the concept of self-actualization. In many instances, education completion is perceived as synonymous with achieving full-potential as an individual. For others, who find fulfillment outside of the traditional academic environment, hobbies have a similar effect. Ads promoting graduate or professional degree programs, such as Northwestern University's Professional Studies program, Purdue and Notre Dame's online MBA programs or technical associate's degrees for sound engineering were the most common within this category. Additionally, there were several ads for subsidized, alternative high school programs, such as Camelot Education, and PSAs on completing high school equivalency. Hobby promotion was also included in this category, such as ads encouraging people to register for a marathon. The designation of the aforementioned categories were crucial when analyzing the data for our results.

Results

The results of field collection are presented with the use of descriptive statistics using the raw data from the Fulcrum app and saved as a .csv file, cleaned and then coded and analyzed with the aid of SPSS. Additionally, data from the Chicago Metropolitan Agency for Planning (CMAP)'s "Community Snapshot Data" in conjunction with the U.S. Census Bureau's 2016 American Community Survey (ACS) was used to identify and categorize demographic, economic and social characteristics across the system. This data was used instead of the

decennial census, as it is an ongoing survey that includes data such as educational level, which is typically limited to only the long-form census.

Overview of Station Platform Categories

All station platform advertisements located on the platform itself or adjacent walls were collected from 65 stations across the system. There was a total of 1,048 advertisements documented.

The data from the 65 stations sampled was divided into geographic quarters (North, Northwest, South, and Southwest) (Table 1) for analysis based on the racial barriers of residentially segregated ghettos and enclaves throughout the CTA system, were also grouped in the same quarters (Table 2). Furthermore, Table 3 provides educational attainment levels by quarter, and Table 4 offers household income by quarter.

Table 1: Advertisement frequency by quarter

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	north	360	34.4	34.4	34.4
	northwest	227	21.7	21.7	56.0
	south	193	18.4	18.4	74.4
	southwest	268	25.6	25.6	100.0
	Total	1048	100.0	100.0	

Table 2: Race/Ethnicity by quarter

		White	Hispanic	Black	Asian	All Other
Valid	north	59.39%	12.43%	13.47%	11.60%	3.09%
	northwest	48.82%	29.23%	12.52%	6.53%	2.88%
	south	8.02%	2.33%	83.28%	4.47%	1.91%
	southwest	19.17%	35.18%	37.52%	10.87%	1.38%

Table 3: Educational attainment by quarter

		Less than High School Graduate	High School Graduate or Equiv.	Some College, No Degree	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Valid	north	7.94%	88.11%	14.10%	4.49%	33.63%	26.67%
	northwest	14.69%	20.28%	16.43%	6.0%	25.52%	17.09%
	south	14.59%	24.14%	26.24%	7.16%	15.14%	12.72%
	southwest	24.69%	27.45%	17.04%	5.59%	14.58%	10.63%

Table 4: Household income by quarter

		Less than \$25,000	\$25,000 - \$49,999	\$50,000 - \$74,999	\$75,000 - \$99,999	\$100,000 - \$149,999	\$150,000 +	Median
Valid	north	23.40%	19.33%	15.79%	11.36%	13.64%	16.47%	\$63,009
	northwest	22.40%	21.95%	16.90%	12.50%	13.53%	12.71%	\$57,350
	south	43.83%	21.90%	13.61%	7.76%	7.52%	5.40%	\$34,721
	southwest	33.72%	25.27%	15.90%	9.50%	8.58%	7.06%	\$42,966

The North Quarter contained 19 stations and included both the Purple and Yellow Lines, in totality, and Red Line stations between Howard and Washington Street in the Loop. This area included the cities of Evanston and Skokie and the communities of Edgewater, Lake View East, Near North Side, Rogers Park, and Uptown. The North Quarter is predominantly White (59.39%), has a bachelor's degree or higher (60.3%) and are upper-middle-class (median income of \$63,009).

The Northwest Quarter contained 16 stations and included the entire Brown Line (excluding the Loop), the Blue Line between O'Hare and Washington stations and the Green Line between Harlem/Lake and Clinton stations. This area included the city of Oak Park and the communities of Albany Park, Austin, Hermosa, Irving Park, Lake View West, Lincoln Square, Logan Square, Norwood Park, and O'Hare. The Northwest Quarter is predominantly White

(48.82%), has an associate's degree or higher (48.61%) and are middle class (median income of \$57,350).

The South Quarter contained 14 stations and included Red Line stations from Cermak/Chinatown to 95th and Green Line stations from Cermak-McCormick Place to Ashland/63rd and Cottage Grove. This area included the communities of Chatham, Douglas, Englewood, Grand Boulevard, Greater Grand Crossing, Near South Side, Roseland, Washington Park, and Woodlawn. The South Quarter is predominantly Black (83.28%), has some college but no degree or less (64.97%) and are lower class (median income of \$34,721).

Lastly, the Southwest Quarter contains 16 stations and included Blue Line stations from Clinton to Forest Park, Orange Line stations from Roosevelt to Midway, and Pink Line stations from Polk to 54th/Cermak. This area included the cities of Cicero, Forest Park, and Oak Park and the communities of Bridgeport, Brighton Park, East Garfield Park, Gage Park, Lower West Side, Near West Side, North Lawndale, and West Garfield Park. The Southwest Quarter is predominantly Black and Hispanic (72.7%), has some college but no degree or less (69.18%) and are lower middle class (median income of \$42,966).

Of the 11 stations located south of the Roosevelt stop on the Green Line, 5 of those stations had no advertising presence or capability to support an ad presence. The number of platforms that lacked advertising infrastructure was unique to the South Quarter and helped account for the discrepancy in documented ads to the other three quarters. This observation echoed the sentiment in "Are you a second-class consumer?" which pointed out that the marginalization of low-income consumers is accentuated by marketers' disinterest in poorer consumers (Winnett & Thomas, 2003).

In addition to the Green Line's platform advertising deficit, the northern half of the Red Line had several platforms with a large number of ads which helped to account for the quantity ads within that quarter; Lake (24), Clark/Division (30), and Loyola (29).

Advertisement Themes by Quarter

To address RQ1, advertisement theme prevalence was noted by geographic quarters representing different race/ethnicity, education, and income in order to examine variation in themes that were being communicated in these areas. Each quarter has its own table.

North Quarter. Of the 1,048 ads that were observed, 360 occurred within the North Quarter. Table 5 outlines the ad frequency by theme in the North Quarter.

Within this area, ads that promoted self-actualization, esteem and belonging needs were the most prevalent, and ads that promoted physiological needs were the least prevalent. While the beauty, fashion, and décor category only accounted for 4.7% of the total ads within that quarter, it accounted for 56.7% of all ads within that category, more than any other quarter.

This region had the highest occurrence of education and hobby ads, accounting for 45.8% of that category. The South Quarter had the second-highest occurrence; however, that area only accounted for 20.8%. During the collection, the only observed occurrence of the Ad Council's finishyourdiploma.org PSAs was at the Purple line's Foster station. This station is the closest CTA platform to Northwestern University, a highly competitive, private research university that tied for tenth place with John Hopkins University for U.S. News and World Report's 2018-2019 National University Ranking.

Overall, the North Quarter saw the lowest rate of educational attainment that was less than high school graduate level (7.94%) and the highest rate of individuals who had completed high school or an equivalent (88.11%). An ad promoting alternative options to completing high

school education appeared off-base, considering the audience and would have been more relevant if placed in a quarter such as the southwest which has the highest rate of individuals with an education lower than high school graduate or equivalent, at 24.69%.

Table 5: Ad frequency by theme in the North Quarter

	food, medicine	safety, legal, employment	mental, sexual, family wellbeing	medical, dental wellbeing	real estate, banking, business	social, app- centric, gaming	beauty, fashion, decor	travel, culture	education, hobbies
Count	27	14	16	49	53	67	17	66	51
% within quarter	7.5%	3.9%	4.4%	13.6%	14.7%	18.6%	4.7%	18.3%	14.2%
% within theme	25.2%	23.3%	20.0%	29.5%	41.4%	31.5%	56.7%	45.8%	42.5%

Northwest Quarter. Of the 1,048 ads that were observed, 227 occurred within the Northwest Quarter. Table 6 outlines the ad frequency by theme.

While medical and dental wellbeing placed second to last in terms of ad prevalence by theme compared to the other areas, this region was the most innovative and creative. The only occurrences of alternative medicine and dental ads occurred in and around the Logan Square area, which is an up-and-coming area experiencing gentrification.

Within this quarter, travel and culture (19.4%) and social ads (18.9%) were highly emphasized, particularly affordable travel to Michigan's Upper Peninsula and mobile service.

Table 6: Ad frequency by theme in the Northwest Quarter

	food, medicine	safety, legal, employment	mental, sexual, family wellbeing	medical, dental wellbeing	real estate, banking, business	social, app- centric, gaming	beauty, fashion, decor	travel, culture	education, hobbies
Count	19	18	13	34	26	43	10	44	20
% within quarter	8.4%	7.9%	5.7%	15.0%	11.5%	18.9%	4.4%	19.4%	8.8%
% within theme	17.8%	30.0%	16.3%	20.5%	20.3%	20.2%	33.3%	30.6%	16.7%

South Quarter. Of the 1,048 ads that were observed, 193 occurred within the South Quarter. Table 7 outlines the ad frequency by theme in this area.

Within this area, ads that promoted physiological needs, such as food and medicine, were the most prevalent (19.2%). Ads in the South Quarter that promoted food and medicine were very different in their product offerings from similar ads in the North and Northwest Quarters. In the South, ads promoting the opening of grocery stores that resolved food deserts and Butcher Boy vegetable oil dominated this category. However, ads in the North and Northwest Quarters emphasized healthier and organic options such as Daily Harvest and Freshii.

Safety, legal, and employment ads were relatively uncommon in this area despite the South Side's reputation for crime in news media. The education and hobby category (13.0%) was driven by programs like Camelot Education, which offers alternative high school completion programs for students within the Chicago Public School system. However, as previously noted, there was no presence of PSAs promoting high school equivalency programs.

Table 7: Ad frequency by theme in the South Quarter

	food, medicine	safety, legal, employment	mental, sexual, family wellbeing	medical, dental wellbeing	real estate, banking, business	social, app- centric, gaming	beauty, fashion, decor	travel, culture	education, hobbies
Count	37	13	24	21	17	43	1	12	25
% within quarter	19.2%	6.7%	12.4%	10.9%	8.8%	22.3%	0.5%	6.2%	13.0%
% within theme	34.6%	21.7%	30.0%	12.7%	13.3%	20.2%	3.3%	8.3%	20.8%

Southwest Quarter. Of the 1,048 ads that were observed, 268 occurred within the Southwest Quarter. Table 8 outlines the ad frequency by theme in the Southwest Quarter.

Ads that promoted physiological needs, such as medical and dental wellbeing (23.1%), in addition to ads that promoted social and gaming (22.4%), were the most popular within this area. The prominence of medical and dental wellbeing ads can be credited to the presence of medical schools such as the University of Illinois Chicago and Rush Medical who utilize platform takeovers close to their campuses to promote their services.

Additionally, the promotion of customer relations management and business suite software, such as Zoho, dominated the real estate, banking and business category as the West Loop continues to see massive office growth as companies migrate into this area (Real Deal, 2019).

Similar to Schooler et al.'s (1996) study concerning the prominence of romance-related reward cues in Black communities and active lifestyle and sportiness reward cues in White communities, ads addressing sexual health were more common in the predominantly Black and Hispanic South and Southwest Quarters. Conversely, ads addressing healthy food brands, alternative medicine and marathon registration were more common in the predominantly White North and Northwest Quarters of the system.

Table 8: Ad frequency by theme in the Southwest Quarter

	food, medicine	safety, legal, employment	mental, sexual, family wellbeing	medical, dental wellbeing	real estate, banking, business	social, app- centric, gaming	beauty, fashion, decor	travel, culture	education, hobbies
Count	24	15	27	62	32	60	2	22	24
% within quarter	9.0%	5.6%	10.1%	23.1%	11.9%	22.4%	0.7%	8.2%	9.0%
% within theme	22.4%	25.0%	33.8%	37.3%	25.0%	28.2%	6.7%	15.3%	20.0%

Lastly, relating to RQ2, a Pearson Chi-Square Test (Table 9) was performed which found a correlation between themes/values and area. The relation between these variables was highly statistically significant, $\chi^2(24, N = 1048) = 100.21, P < 0.001$. The type of advertising themes/values presented in outdoor advertising on rapid transit platforms is strongly correlated to the race/ethnicity, education, and income where the ad is placed.

Discussion

As media theorist Marshall McLuhan touched on in *Understanding Media*, “Advertising aims at the goal of a programmed harmony among all human impulses and aspirations and endeavors.” His classification of print media as “Hot Media,” or one that engages a sense, demands little interaction from a passive audience, with contents that are spoon-fed and restricted to what the source offers at that time, can be applied to large scale print media such as OOH ads (McLuhan, 1966, pp. 22-23).

Overall, ad content that occurs in lower-income quarters leans toward fulfilling physiological, safety, and belonging needs, whereas higher-income quarters contains more ad content that fosters belonging, esteem, and self-actualization needs.

This finding is right in line with Maslow's requirement that the fulfillment of basic needs is mandatory for progression. However, this is not a perfect model. As it stands, this hierarchy

fails to account for the inextricable and non-linear link between education and earning potential and income influence on the acquisition of products and services that satisfy basic needs.

As students, professionals, and scholars, the themes and values that are currently being promoted and their relationship with target audiences must be understood both within the context of present and future advertising technology.

As it currently stands, markets that are dominated by static, print OOH, like Chicago, see slower ad turnover due to in part to more extended research and execution lead times. However, foreign markets, such as Germany and the UK, are beginning to experience testing of Google's new programmatic buying strategy that utilizes access to harvest user data and target the right pedestrian consumer. The goal is to integrate this information with faster, digital OOH ad technology (Bloomberg, 2018).

We must realign and reinforce a strong ethical base before large-scale technological upgrades increase the speed of turnover within this medium.

While the messages observed during this study were not unethical, they also did not place the same emphasis on self-improvement and development across income, race, and education levels. The power of advertising and its ability to dictate messages, values, and social norms while simultaneously wielding more significant influence in certain markets based on audience experience and interpretation should be acknowledged not merely in theory but in practice as well.

Through expanding the promotion of self-actualization values across these lines, there is room for improved consumer awareness of products and services that could ultimately improve the quality of human life. By firmly grounding advertising content in the pillars of truthfulness, and human dignity, promoting harmony among all human impulses, aspirations, and endeavors and leaning into social responsibility, advertisers can elevate their ethical behavior in the

advertising landscape. By decompartmentalizing the promotion of particular values within ghettos and enclaves, advertisers have the power to address far-reaching societal consequences in a way that can help to systematically dismantle communication that magnifies marginalization and the stagnation of status as it currently exists.

This study is limited to Chicago, and therefore, the results cannot be generalized to the entire United States. Future studies can examine the presence of and messages of interior train car advertising in areas that see a lack of platform advertising to understand their heightened influence in "advertising deserts." Additionally, this study can be adapted for other American and international rapid transit systems in order to explore if these themes occur with the same prevalence in different markets.

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