The background features a light beige field with a fine, repeating pattern of small brown dots. Overlaid on this are several sets of concentric circles in a medium brown color. One set of circles is in the upper right, another in the lower right, and a third in the upper left. A large, dark olive-green shape, resembling a stylized leaf or a drop, is positioned on the left side, partially overlapping the bottom-left corner of the dotted area.

RYETAGA

2022

RYETAGA

Technical Association of the Graphic Arts
Ryerson University Student Chapter © 2022

*No part of this publication shall be reproduced without permission
and written consent from the author(s).*

Published by RyeTAGA
www.ryetaga.com

School of Graphic Communications Management

Ryerson University
125 Bond Street
Toronto, Ontario
M5B 1Y2 Canada
www.ryerson.ca/gcm





TABLE OF CONTENTS

6 Introduction

10 An Exploration of Environmental Impacts and Consumer Perceptions of Soft Drink Packaging

Jessica Huynh

46 Fast Food Takeout Packaging: Choose Your Fighter!

Chehek Vohra

76 A Powerful Tool: How Graphic Design Plays into Chinese Propaganda

Anushka Bhardwaj

106

**The Brown Stripe In Pride: Exploring
South Asian Queer Liberation Through
Graphic Design**

Afrah Idrees

144

**Living Past Expectations: An
Analysis on Print Marketing
Materials' Integration Amidst
the Digital Age**

Erin Navarro

178

Credits

190

Colophon

192

Sponsors

A Letter From...
**OUR FACULTY
ADVISOR:**

**MARTIN
HABEKOST**



Dear RyeTAGA team,

After a hiatus of two years the annual technical conference of TAGA will take place in 2022 in Oklahoma City. The conference was supposed to be held there in 2020, but as we all know the world as we knew it changed drastically in March 2020. The 2021 “conference” was a virtual event with the student competition still taking place. The journal publication was in electronic format and posed its own set of challenges. I still can’t believe that our publication was the runner up with such a tight difference in overall points. In all my years attending the conference and being involved in the judging process and tabulating the competition results last year’s competition was the tightest I’ve ever witnessed.

As the faculty advisor it is always my pleasure to work with such a dedicated group of students. I enjoy the process of seeing how the creative process takes place and you, the RyeTAGA student group, come together in bringing the creative idea to life. The print production of the journal poses its own set of challenges, but you overcame them. Now we have this beautiful journal in our hands and hopefully the judging panel will find it as well made as we think it is and that the RyeTAGA team will win the competition.

Enjoy the conference, make new friends and expand your knowledge and your professional network.

A handwritten signature in black ink, appearing to read 'Martin Habekost'.

Martin Habekost, Dr. rer. nat.
Faculty Advisor, RyeTAGA

A Letter From... **OUR PRESIDENT:**

**NANCY
LY**



Dear TAGA,

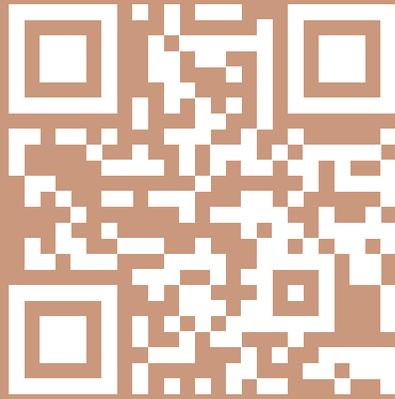
It is a great pleasure that we are able to return to print this year and showcase our 2021/2022 Student Publication Journal. With starting any new role, a learning curve is inevitable, and this was no exception when we started amidst a pandemic and the myriad of obstacles that entailed.

On behalf of the team, we would like to thank everyone who has supported RyeTAGA in any capacity this year to help make this journal come to life. To our team, sponsors, GCM faculty and staff, and family and friends, the production of our journal wouldn't be possible without their support and generosity. An extra special thank you goes to our faculty advisor, Martin Habekost, for his constant support and guidance throughout the entire process.

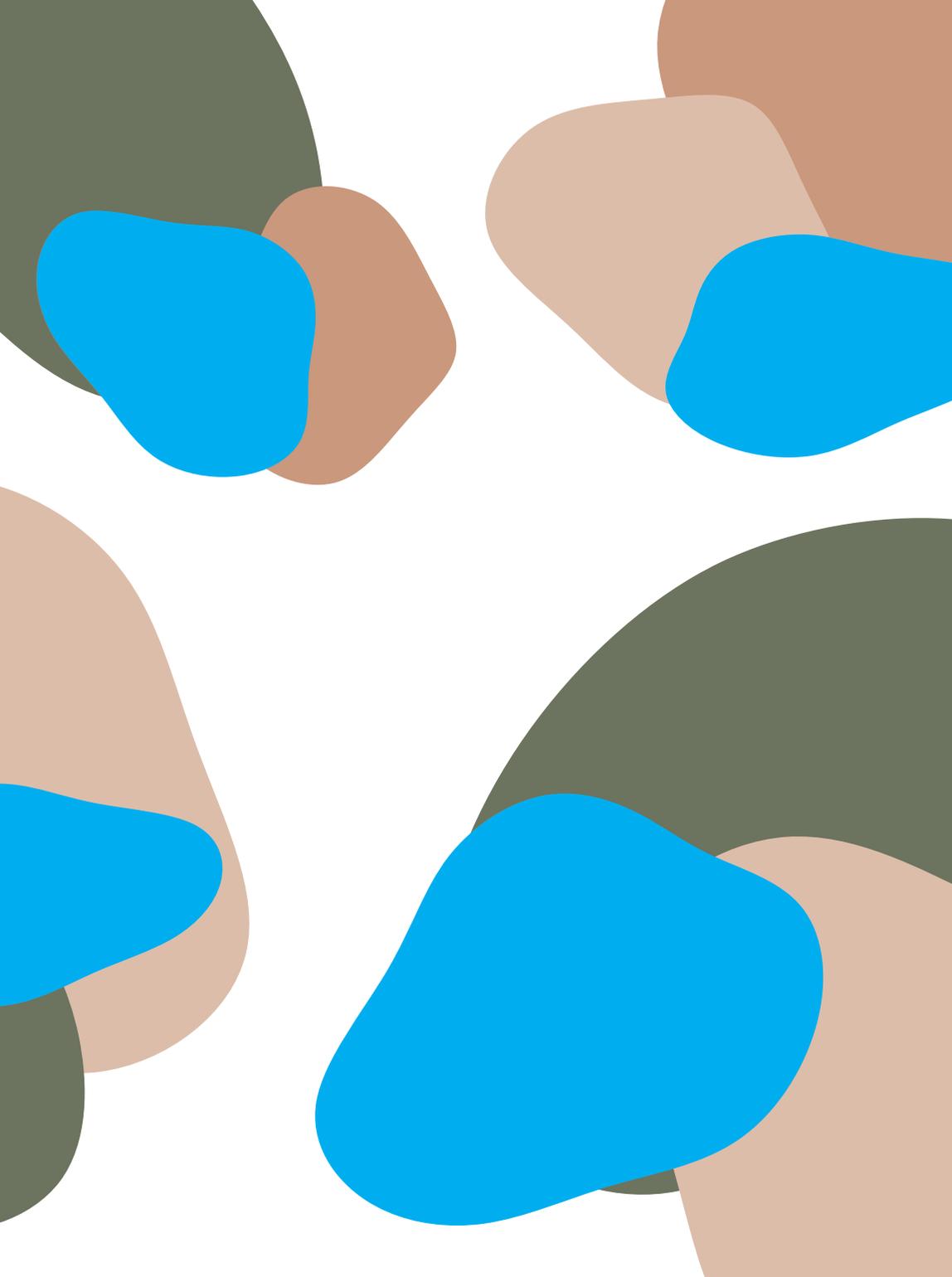
Regardless of the outcome, we are incredibly proud and excited about what we have accomplished this year working hybrid. This project has taught us all to learn to experience life and its obstacles as they happen. We can confidently walk away this year with a greater understanding and appreciation of the Graphic Arts industry, and carry these experiences with us as we venture off into our careers. TAGA continues to challenge students to think creatively and I am excited to see the journals that RyeTAGA will continue to produce in the future.

A handwritten signature in black ink, appearing to read 'Nancy Ly'. The signature is stylized and cursive, with the first name 'Nancy' written in a larger, more prominent script.

Nancy Ly
President, RyeTAGA



Scan the QR code to access an audiobook version of this year's papers.



01

An Exploration of Environmental Impacts and Consumer Perceptions of Soft Drink Packaging

Jessica Huynh



ABSTRACT

There is an increasing concern with how packaging impacts the environment. This thesis investigates the environmental impacts of The Coca-Cola Company's plastic, glass and aluminum beverage packaging systems, including their secondary packages. As well, consumer environmental impact perception will be explored. A Life Cycle Assessment (LCA) methodology was used to evaluate the packaging systems. An LCA provided a holistic view and identified a connection between the packaging's life cycle and potential environmental impacts involving it. A survey was conducted with 160 responses asking consumers to rate each package on a numerical scale to provide insight on their environmental impact perception. The LCA results concluded that Coca-Cola's plastic bottle packaging with plastic shrink wrap had the least environmental impact, followed by the aluminum can with paperboard box and lastly, glass bottle with paperboard carrier had the greatest environmental impact. The survey results contrasted the LCA findings, with consumers believing that Coca-Cola's glass packaging had the least environmental impact, followed by aluminum and lastly, plastic bottles have the greatest environmental impact. Further analysis of the results suggested that plastic packaging has a negative connotation due to historical malpractices and the existence of single-use plastic. For there to be a shift in consumer perception, companies can implement more recycled plastic into their packaging, spread awareness around this topic and enhance their packaging designs to reflect these changes. However, there is also a need for more efficient recycling systems, a reduction in the use and manufacturing of single-use plastics, a movement towards creating circular economies and helping consumers understand how to recycle packaging properly.

INTRODUCTION

There has been an increasing need for environmental attention, especially in the food and beverage industry (Del Rosso, 2020). The consumer market has influenced the rise of increasing environmental packages that contain less polluting materials, are manufactured in more ecological ways, ones that contain less pollutants and are focused on recyclability (Del Rosso, 2020).

Though profit is the primary focus of many food and beverage companies, consumers' willingness to purchase goods that do not indicate ecological consciousness has decreased (Whelan, & Kronthal-Sacco, 2019). In 2018, products that visibly claimed to be sustainable accounted for 16.6% of the consumer packaged goods market compared to 14.3% in 2013. In addition, products that were marketed as sustainable showed a 5.6% faster growth rate than their competitors, who were not (Whelan, & Kronthal-Sacco, 2019).

The Coca-Cola Company produced earnings of \$37 billion in the past year, selling billions of packages ranging from plastic bottles, glass bottles, aluminum cans and paper cartons (The Coca Cola Company, 2019a). The Coca-Cola Company has also made strides in becoming more sustainable and environmentally conscious.

With a rise in environmental consciousness and sustainability in the present world, it is important to utilize packaging in an effective and efficient manner that contributes to decreasing environmental impacts. As well, studying consumers' perception of the packaging and how they respond to the environmental impacts of packaging options is necessary. This thesis aims to investigate the environmental impacts of The Coca-Cola Company's classic beverage packaging. The focus will be on the North American market, with an evaluation of plastic, glass and aluminum beverage packaging in addition to their secondary packages. The findings will also be compared with consumers' environmental impact perception regarding those packaging materials. This thesis will be using a Life Cycle Assessment (LCA) and Cradle-to-Cradle system boundary to explore the impacts of those materials on the environment.

LITERATURE REVIEW

This literature review will explore consumer environmental impact perception and its implications concerning beverage packaging materials through analyzing relevant research studies.

Niero M., Hauschild M.Z., Hoffmeyer, S.B., & Olsen, S.I (2017) evaluates the use of the Life Cycle Assessment (LCA) methodology concerning the beverage industry, eco-efficiency, and eco-effectiveness. An LCA is used to identify a connection between the packaging's life cycle and potential environmental impacts involving it. An LCA is a useful tool to quantify eco-efficiency improvements, meaning increasing the value of a package while reducing resource use and environmental impact. Using an LCA allows for opportunities to pinpoint areas to reduce environmental impacts through comparisons.

Saleh, Y. (2016) researched the environmental impacts of beverage packaging materials in Palestine. The materials chosen consisted of glass, aluminum, and PET packaging. Saleh used an LCA methodology to evaluate and compare the materials. The environmental impacts that are concerned with include "water consumption, non-renewable energy, solid waste, human toxicity, terrestrial acidification, global warming potential, and respiratory effects." Saleh concluded that PET beverage packaging has the least environmental impact. Aluminum and glass packaging material followed afterward.

Simon B, Amor M.B. & Földényi, R. (2016) concluded that packaging materials significantly contribute to the beverage value chain's overall impact. Recycling has a significant effect on greenhouse gas emissions, specifically with aluminum cans and glass bottles. Simon, Amor, and Földényi conducted an LCA to evaluate beverage packaging materials' impacts on the environment. The study also used a "Cradle to Grave" system boundary to define the LCA evaluation. An investigation of global warming potential, greenhouse gas emissions (GHG), human toxicity air emissions, and transportation impact was carried out. When the whole life cycle of packaging materials is considered, glass and aluminum beverage cans have the highest GHG impact. However, aluminum

cans' GHG impact may decrease more than PET bottles if a closed-loop recycling method was implemented. From this research, it is clear that proper recycling system implementation to recycle materials such as glass bottles, aluminum cans, and PET bottles has a significant impact on the environment.

Dam Y. (1996) conveys the significance of incorporating consumer beliefs into environmentally responsible packaging decisions. According to Dam, packaging needs to be environmentally perceived by the consumer, or else the producer of the package loses a competitive advantage. Marketing ecologically responsible packaging to consumers requires information concerning consumer beliefs. Concerning materials, consumers perceive glass as the most environmentally friendly packaging material by consumers. Paper is second to glass, followed by tin cans and cardboard beverage containers come after. Lastly, plastic packaging is perceived to have the most significant environmental impact.

PACKAGING INFORMATION

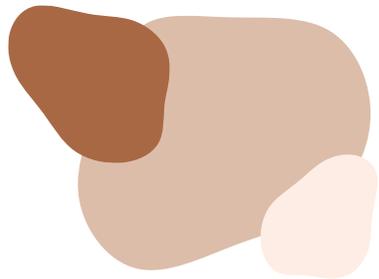
The Plastic Bottle

Primary Package

The Coca-Cola Company produces a Polyethylene Terephthalate (PET) bottle (Figure 1). And it will be assumed in this research that Coca-Cola uses a bottle cap composed of High-Density Polyethylene (HDPE).

PET, a type of thermoplastic, is commonly used in packaging because of its high gas barrier properties (Emblem & Emblem, 2012). The use of recycled PET (rPET) is increasingly popular for food and non-food products (Emblem & Emblem, 2012).

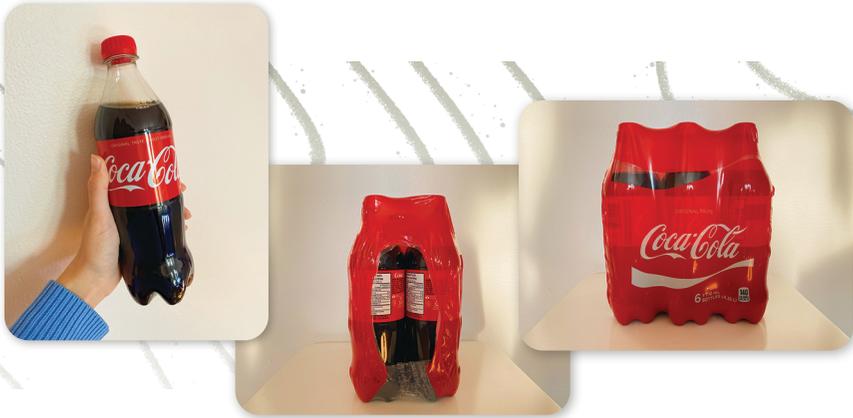
HDPE is a rigid and high tensile strength plastic, normally used to manufacture screw caps (Emblem & Emblem, 2012).



Secondary Package

The Coca-Cola company uses a plastic shrink film to secure their primary packaging (Figure 2). It will be assumed in this research that Coca-Cola uses Low-Density Polyethylene (LDPE) as their choice material for secondary packaging of their PET primary packaging.

LDPE is commonly used as a collation shrink film for secondary packaging. It is a soft and flexible material that stretches before breakage occurs (Emblem & Emblem, 2012).



Figures 1-2. (Left to Right) *Photo of Coca-Cola's Plastic Bottle Primary Packaging;*
Photos of Coca-Cola's Plastic Bottle Secondary Packaging.

The Glass Bottle

Primary Package

The Coca-Cola Company uses glass to create their glass bottles, and it will be assumed that aluminum is used for its crimped crown cork closure (Figure 3).

Commercial glass is made of silica, which is a component in sand (Emblem & Emblem, 2012). An essential component of glass is cullet, which is recycled glass. Cullet reduces the energy needs of glass manufacturing by enhancing the melting rate. Glass container production follows three primary methods: blow-and-blow, press-and-blow and narrow neck press-and-blow (Emblem & Emblem, 2012).

A crimped crown cork acts as the glass bottle's closure (Emblem & Emblem, 2012). They seal carbonate beverages and withstand internal pressure from the liquid it contains (Emblem & Emblem, 2012). For this LCA, it will be assumed that Coca-Cola uses closures composed of aluminum with a coating.

Secondary Package

A paperboard carrier is used as secondary packaging for the glass bottles (Figure 4). It will be assumed that Coca-Cola uses Solid Unbleached Board (SUB), also known as Coated Unbleached Kraft Paperboard (CUK). This paperboard type is composed of wood fibres, and a clay-coated layer is applied on top to provide a smooth white printing surface, while providing excellent strength and tear resistance (North American Packaging Association, 2019).



Figures 3-4. (Left to Right). *Photo of Coca Cola's Glass Bottle Primary Packaging;*
Photo of Coca Cola's Glass Bottle Secondary Packaging

Metal Cans

Primary Packaging

The Coca-Cola Company uses aluminum cans (Figure 5). A two-piece can design consists of a seamless cylindrical body where a flat disk is drawn up and formed into a tall can (Emblem & Emblem, 2012). Metal cans are thermally stable, strong and readily recyclable. Metal cans are relatively low cost, thermally stable, strong, rigid, opaque, easy to process on high-speed lines and readily recyclable.

As a packaging material, metal offers a total barrier to gas, moisture and light. (Emblem & Emblem, 2012). Pre-cut aluminum closures are sealed onto the tops of the metal cans, and a pull tab is fitted over a rivet pin (Emblem & Emblem, 2012).

Secondary Packaging

A paperboard rectangular box is used as secondary packaging for the aluminum cans (Figure 6). In this LCA, it will be assumed that Coca-Cola uses Solid Unbleached Board (SUB), also known as Coated Unbleached Kraft Paperboard (CUK), similarly to the glass's secondary packaging.



Figures 5-6. (Left to Right). *Photo of Coca Cola's Aluminum Can Primary Packaging;*
Photo of Coca Cola's Aluminum Can Secondary Packaging

Life Cycle Assessment Information

A Life Cycle Assessment (LCA) will be used in this thesis to determine the environmental impacts of Coca-Cola's beverage packaging options. An LCA is used to identify a connection between the packaging's life cycle and potential environmental impacts involving it. The packaging life cycle describes the process of the creation of a package from its raw material extraction, manufacturing, transportation, end-use and disposal phases. The environmental impact categories that will be measured are fossil fuel usage (MJ), greenhouse gas emissions (kg CO₂ eq.), water use (kl) and daily human impact (DALY). Trayak's EcoImpact-COMPASS software was chosen to collect this data.

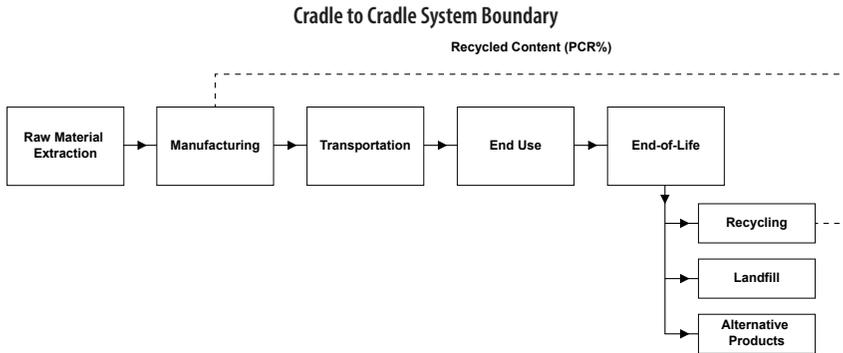


Figure 7. *Cradle to Cradle System Boundary Diagram*

System Boundary

A system boundary evaluated the life cycle of a package. The study implemented a cradle-to-cradle methodological approach in the LCA to capture data from raw material extraction to the end-of-life disposal phase. However, the end-of-life stage extended to the recycling processes, which created a conscientious environmental approach. For this LCA, the transportation phase was not considered (Figure 7).

Functional Unit

A functional unit is a number that allows for equal comparison of several different items. This thesis examines three separate primary packages with varying volumetric capacities and their secondary packages. A functional unit allows for an equal comparison of each package by setting a reference point. The functional unit of this LCA is packaging materials used to contain and protect 1000 L of soft drink within the system boundary.

Assumptions and Limitations

The post-consumer recycling percentage (PCR%) of each primary packaging option and their secondary packages will be assumed in some capacity. The information about PCR% Coca-Cola's packaging was found on their European website, as their North American website did not yield this information. It will be assumed that the PCR% of the packaging materials are relatively the same in Europe as

they are in North America for this LCA. These PCR% are 25% for PET bottles, 47% for glass bottles, and 42% for aluminum cans (The Coca Cola Company, 2020b). In addition, it will be assumed that PCR% for the Solid Unbleached Board (SUB) also known as Coated Unbleached Kraft Paperboard (CUK) consists of a PCR% of 20% (American Forest & Paper Association, n.d.). The LDPE secondary package used for plastic bottles will have a PCR% of 0%.

Manufacturing processes will also be assumed for this LCA. The manufacturing processes for each packaging material were estimated based on industry practices.

Transportation information relating to Coca-Cola's services was limited, and thus transportation was omitted from the system boundaries of the LCA and every single packaging system.

Lastly, due to limitations of the LCA software regarding the functional unit, a convergent factor was manually calculated in order to determine the appropriate weight and number of packages required to hold 1000 L of Coca-Cola. See (Appendix A) for calculations.

Characteristics of Products Input into the LCA

Table 1: Characteristics of the Primary and Secondary Packaging of Plastic Bottles

PRIMARY PACKAGING	MATERIAL	MASS (g)	PCR %	PROCESS	PACKAGING TYPE	PEDIGREE SCORE
Cap	High-Density Polyethylene (HDPE)	2816	0	Injection Molding	Other	(1, 3, 1, 5, 3,1)
Bottle	Polyethylene Terephthalate	36608	25	Blow Molding	Soft Drink Bottles	(1, 1, 1, 2, 3,1)

SECONDARY PACKAGING	MATERIAL	MASS (g)	PCR %	PROCESS	PACKAGING TYPE	PEDIGREE SCORE
Shrink Wrap	Low-Density Polyethylene (LDPE)	3744	0	Thermo-forming Plastic Sheet	Other Plastic Packaging	(1, 3, 1, 5, 3,1)

Table 2: Characteristics of the Primary and Secondary Packaging of Glass Bottles

PRIMARY PACKAGING	MATERIAL	MASS (g)	PCR %	PROCESS	PACKAGING TYPE	PEDIGREE SCORE
Crimped Crown Closure	Aluminum	8438	42	Aluminum Sheet Rolling	Foil and Closures	(1, 3, 1, 5, 5,1)
Bottle	Glass Container	624412	47	Production of Glass Production	Beer and Soft Drink Bottles	(1, 1, 1, 2, 1,1)

SECONDARY PACKAGING	MATERIAL	MASS (g)	PCR %	PROCESS	PACKAGING TYPE	PEDIGREE SCORE
Paperboard Carrier	Solid Unbleached Board (SUB)	40071	20	Production of Carton (Offset)	Folding Carton	(1, 3, 1, 3, 3,1)

Table 3: Characteristics of the Primary and Secondary Packaging of Aluminum Cans

PRIMARY PACKAGING	MATERIAL	MASS (g)	PCR %	PROCESS	PACKAGING TYPE	PEDIGREE SCORE
Aluminum Closure	Aluminum	2816	42	Production of Aluminum Can	Foils and Closures	(1, 1, 1, 2, 1,1)
Can	Aluminum	33792	42	Production of Aluminum Can	Beer and Soft Can Drinks	(1, 1, 1, 2, 1,1)

SECONDARY PACKAGING	MATERIAL	MASS (g)	PCR %	PROCESS	PACKAGING TYPE	PEDIGREE SCORE
Paperboard Rectangular Box	Solid Unbleached Board (SUB)	21528	20	Production of Carton (Offset Printing)	Folding Carton	(1, 3, 1, 3, 3,1)

METHODOLOGY

Life Cycle Assessment

Trayak's EcoImpact-COMPASS software was chosen as the preferred life cycle assessment (LCA) software. An LCA methodology provides a holistic approach in the investigation of evaluating environmental impacts. This form of research provides a perspective of the entire life cycle of a package ranging from raw material extraction to its end of life. This software required information such as weight (See Appendix B), types of packaging materials and the characterizations of manufacturing processes. The use of secondary research was used to assume the manufacturing processes of the packages (Table 1, 2 & 3). The manufacturing processes were assumed as Coca-Cola does not directly reveal information pertaining to their manufacturing procedures. As well, post-consumer recyclability percentages about each packaging material was gathered through secondary sources. The PCR% used in the LCA for plastic, aluminum and glass materials were 25%, 42% and 47%, respectively. It was assumed that Coca-Cola's European market uses the same PCR% as North America. This was because the information about North America's PCR% was not readily available. To perform the LCA, a functional unit of 1000 L was used to equalize the volumetric differences in packages. A limitation of the LCA software is the calculation of the functional unit. Therefore, a convergent factor was used in the calculations of the weights of each primary package and secondary package in relation to the functional unit (See Appendix A). Transportation was omitted from the LCA due to the limited information present about Coca-Cola's transportation system. The LCA provided insights on 4 main categories, Fossil Fuel Use (MJ), GHG Emissions (kg CO₂ eq.), Water Use (kl) and Human Impact (DALY). Trayak's EcoImpact-COMPASS provided graphs and charts that displayed the results and no further processing of the data was required.

Consumer Survey

The study used Google Forms to investigate the insights of consumers' environmental impact perception on Coca-Cola's packaging (see Appendix C). The survey received 160 responses and was active from October 25, 2020, to November 7, 2020. The survey received responses from those in the age range of 18 - 24 living in Canada. The survey asked participants to rate each primary and secondary package on their environmental impact. The scale ranged from 1 to 10 to quantify their opinions, one indicating that the package had the most negligible environmental impact and ten being the package with the most significant environmental impact. The questionnaire also investigated recycling, beverage washout practices, and consumer purchase behaviour. Following the collection of the results, they were transferred into Microsoft Excel for processing through an ANOVA single factor analysis. The results compared the mean of each package, identified the P-value, and graphed the final data.

RESULTS

Primary and Secondary Package

Fossil Fuel Use (MJ Deprived)

The LCA software Traya's EcoImpact-COMPASS calculates the total quantity of fossil fuel consumed throughout the life cycle reported in megajoules (MJ) equivalents deprived. This calculation uses the IMPACT World+ method and assumes that fossil fuels are primarily used for energy purposes such as coal, petroleum, and natural gas. The total impact of fossil fuel usage was significantly higher in Coca-Cola's glass bottle packaging (with paperboard carrier) than the plastic bottle (with plastic shrink wrap) packaging and aluminum can (with paperboard box) packaging. Overall, Coca-Cola's plastic bottle packaging uses 64.41% fewer fossil fuels than their glass packaging, and aluminum can packaging uses 59.69% fewer fossil fuels than their glass packaging (Figure 8 & Table 4).

The most notable difference in fossil fuel usage is seen in the Material phase. In addition, the manufacturing of the glass bottle packaging (with paperboard carrier) uses the least amount of fossil fuel compared to aluminum can production and plastic bottle packaging manufacturing. However, due to the material phase, Coca-Cola's glass packaging overall has the highest fossil fuel usage.

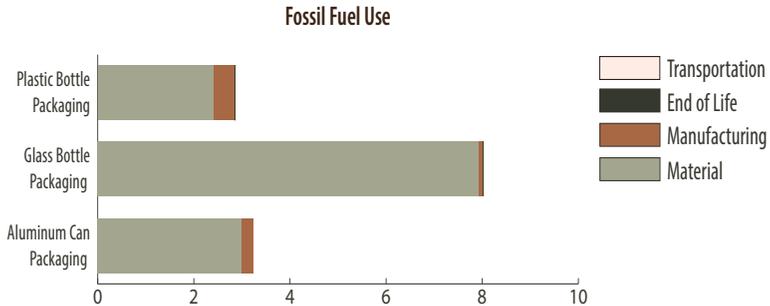


Figure 8. Graph displaying the LCA results of Fossil Fuel Usage (MJ Deprived)

Table 4: Comparative Numerical LCA Results of Fossil Fuel Usage (MJ Deprived)

PACKAGE TYPE	MATERIAL	MANUFACTURING	END OF LIFE	TOTAL IMPACT (MJ DEPRIVED)
Plastic Bottle Packaging	2.40	0.4479	0.004437	2.85
Glass Bottle Packaging	7.93	0.07918	0.006499	8.02
Aluminum Can Packaging	2.99	0.2391	0.005402	3.23

GHG Emissions (kg CO₂ eq.)

The LCA software Traya's EcoImpact-COMPASS calculates the total quantity of greenhouse gases (GHG) emitted throughout the life cycle reported in kilograms of CO₂ equivalents. It uses the IPCC 2013 method and considers climate feedback loops.

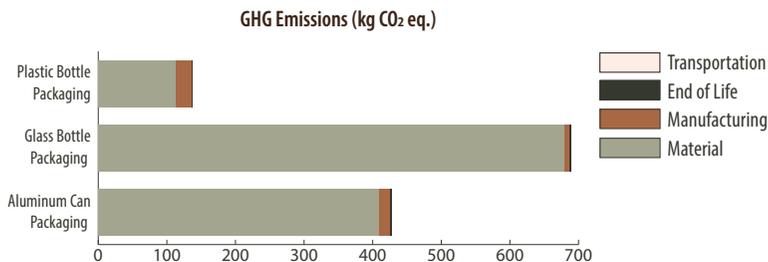


Figure 9. Graph displaying the LCA results of GHG Emissions (kg CO₂ eq.)

The total GHG emissions impact of Coca-Cola's glass bottle packaging (with paperboard carrier) was significantly higher than the plastic bottle (with plastic shrink wrap) packaging and moderately higher than aluminum can (with paperboard box) packaging. Overall, Coca-Cola's plastic bottle packaging emits 80.26% less GHG than their glass packaging, and aluminum can packaging emits 38.18% less GHG than their glass packaging (Figure 9 & Table 5). The most notable difference in GHG emission is seen in the Material phase. In addition, the manufacturing of the glass bottle packaging (with paperboard carrier) emits the least amount of GHG compared to aluminum can production and plastic bottle packaging manufacturing. As well, the aluminum cans emit the least amount of GHG at the end of life stage among the three packaging options.

Table 5: Comparative Numerical LCA Results of GHG Emissions (kg CO₂ eq.)

PACKAGE TYPE	MATERIAL	MANUFACTURING	END OF LIFE	TOTAL IMPACT (kg CO ₂ eq)
PET Bottle	109.73	21.99	4.14	135.85
Glass Bottle	688.16	5.83	4.01	688.16
Aluminum Can	407.67	16.41	1.32	425.40

Water Use (Kiloliters)

The LCA software Traya's EcoImpact-COMPASS calculates the relative available water remaining per area in a watershed after the demand of humans, aquatic ecosystems, and manufacturing process has been met. A consideration for water scarcity and the results represents the relative value in comparison with the average liters consumed in the world.

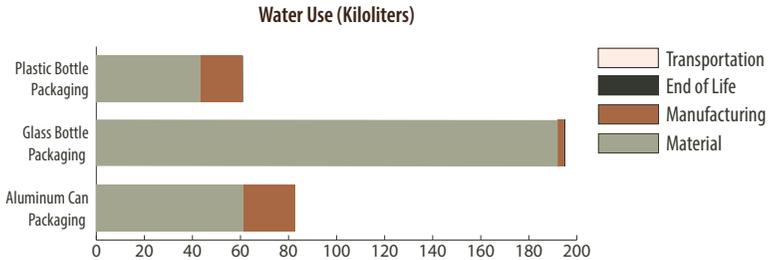


Figure 10. Graph displaying the LCA results of Water Usage (kl)

Table 6: Comparative Numerical LCA Results of Water Usage (kl)

PACKAGE TYPE	MATERIAL	MANUFACTURING	END OF LIFE	TOTAL IMPACT (kl)
PET Bottle	42.62	17.67	0.2022	60.49
Glass Bottle	192.41	2.54	0.2617	195.21
Aluminum Can	60.58	6.20	0.2040	66.99

The total water use impact of Coca-Cola's glass bottle packaging (with paperboard carrier) was significantly higher than the plastic bottle (with plastic shrink wrap) packaging and significantly higher than aluminum can (with paperboard box) packaging. Overall, Coca-Cola's plastic bottle packaging uses 69.01% less water than their glass packaging and aluminum can packaging uses 65.68% less water than their glass packaging (Figure 10 & Table 6). The most notable difference in water usage is seen in the Material phase.

In addition, the manufacturing of the glass bottle packaging (with paperboard carrier) uses the least amount of water compared to aluminum can production and plastic bottle packaging manufacturing. The difference in water usage in the end of life stage is very minimal among the three packaging options. However, due to the material phase, Coca-Cola's glass packaging overall has the highest water usage impact.

Human Impact (DALY)

The LCA software Traya's EcoImpact-COMPASS calculates the number of environmental emissions resulting in particulate, cancer & toxic non-cancer impacts to humans released throughout the life cycle. The results convey these three measurements in Disability Adjusted Life Years (DALY). The guide of Impact World+ is used and considerations of severity factors are included.

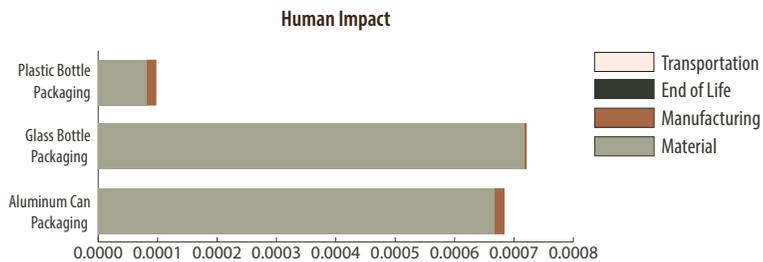


Figure 11. Graph displaying the LCA results of Human Impact (DALY)

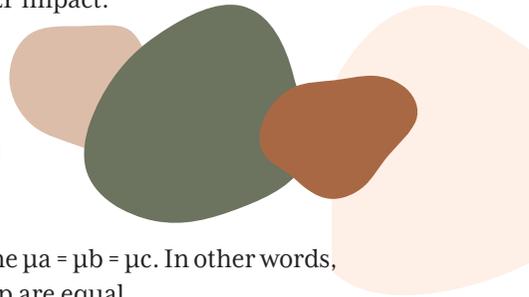
Table 7: Comparative Numerical LCA Results of Human Impact (DALY)

PACKAGE TYPE	MATERIAL	MANUFACTURING	END OF LIFE	TOTAL IMPACT (DALY)
PET Bottle	7.7861e-5	1.7136e-5	4.3184e-7	9.5430e-5
Glass Bottle	0.0007130	5.4353e-6	4.2746e-7	0.0007189
Aluminum Can	0.0006648	1.3857e-5	3.6965e-7	0.0006790

The total DALY impact of Coca-Cola's glass bottle packaging (with paperboard carrier) was significantly higher than the plastic bottle (with plastic shrink wrap) packaging and relatively similar to aluminum can (with paperboard box) packaging. Overall, Coca-Cola's plastic bottle packaging impacts 84.94% less DALY than their glass packaging. In contrast, Coca-Cola's Aluminum packaging impacts 12.44% more DALY than their glass packaging (Figure 11 & Table 7). The most notable difference in DALY is seen in the material phase. The manufacturing of the glass bottle packaging (with paperboard carrier) has the least amount of DALY impact compared to aluminum can production and plastic bottle packaging manufacturing. As well, the difference in DALY impact at the end of life stage is very minimal among the three packaging options. However, due to the material phase, Coca-Cola's glass packaging overall has the highest DALY impact.

Survey Results

Environmental Impact Rating of Each Beverage Packaging



The Null Hypothesis (H_0) states that the $\mu_a = \mu_b = \mu_c$. In other words, the average of the values in each group are equal.

The alternative hypothesis (H_a) states that there is at least one inequality (ALOI). Meaning that at least one of the groups is different from another group.

The P-Value indicates whether the null hypothesis is not rejected, or in other words, if the alternative hypothesis should be accepted. This analysis was based on an alpha of 0.05.

Table 8: ANOVA: Single Factor for Primary Packaging

GROUP	PRIMARY PACKAGING MATERIAL	NUMBER OF RESPONSES	SUM OF ENVIRONMENTAL IMPACT RATINGS	AVERAGE	VARIANCE
a	Plastic Bottle	160	1242	7.76	2.87
b	Glass Bottle	160	805	5.03	3.64
c	Aluminum Can	160	969	6.06	4.61

SOURCE OF VARIATION	SS	df	MS	F	P-VALUE	F CRIT
Between Packaging Materials	609.15	2	304.58	82.16	2.19e-31	3.01
Within Packaging Materials	1768.31	477	3.71			
Total	2377.47	479				

Table 8 showcases the ANOVA single factor analysis for data referencing questions on the survey pertaining to primary packaging. In this situation, the P-value was calculated as $2.19e^{-31}$. When comparing the P-value to an alpha of 0.05, because the p-value calculated is less than the alpha, this indicates that the null hypothesis should be rejected. Meaning that the alternative hypothesis is accepted instead and there is at least one inequality between the different groups.

This indicates that the results obtained from the survey about Coca-Cola's primary packaging have noticeable differences and thus we can determine that consumers' environmental impact and sustainability perceptions vary from packaging material to packaging material.

Table 9: ANOVA: Single Factor for Secondary Packaging

GROUP	SECONDARY PACKAGING MATERIAL	# OF PARTICIPANTS	SUM OF ENVIRONMENTAL IMPACT RATINGS	AVERAGE	VARIANCE
a	Plastic Wrap	160	1327	8.29	3.29
b	Plastic Carrier	160	690	4.31	4.69
c	Paperboard Box	160	725	4.53	4.52

SOURCE OF VARIATION	SS	df	MS	F	P-VALUE	F CRIT
Between Packaging Materials	1602.91	2	801.46	192.17	6.15e-62	3.01
Within Packaging Materials	1989.41	477	4.17			
Total	3592.33	479				

Table 9 showcases the ANOVA single factor analysis for data referencing questions on the survey pertaining to secondary packaging. In this situation, the p-value was calculated as $6.15e-62$. When comparing the p-value to an alpha of 0.05, because the p-value calculated is less than the alpha, this indicates that the null hypothesis should be rejected. Meaning, that the alternative hypothesis is accepted instead and there is at least one inequality between the different groups.

This indicates that the results obtained from the survey about Coca-Cola's secondary packaging have noticeable differences and thus we can determine that consumers' environmental impact and sustainability perceptions vary from packaging material to packaging material.

As the alternative hypothesis has been accepted in both situations, the average environmental impact rating can be assessed. Figure 12 displays the averages pertaining to plastic, glass and aluminum beverage packaging.

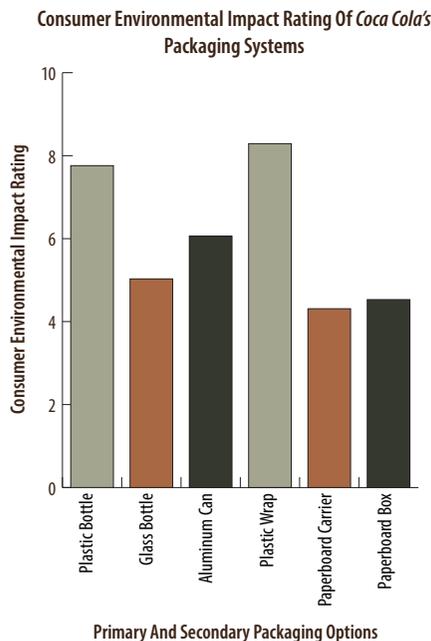


Figure 12. *Graph of Average Ratings of Each Primary Soft Drink Packaging*

Plastic bottles were rated the highest with an average rating of 7.76, aluminum cans were rated second highest with an average rating of 6.06 and glass bottles were rated the lowest with an average rating of 5.03 (Figure 12). These results indicate that consumers believe that plastic bottles have a greater environmental impact than aluminum and glass beverage containers.

This trend is similarly seen in the results pertaining to Coca-Cola's secondary packaging. The plastic wrap packaged around the plastic bottles had the highest average rating of 8.29. Whereas the paperboard box rated second highest with an average rating of 4.53 and the paperboard carrier rated lowest with an average rating of 4.31 (Figure 12).

Recycling and Wash Habits of Consumers

Plastic Bottles

Figures 13 and 14 described the recycling habits and washout practices of respondents who purchased plastic bottles. 89.4% of respondents actively recycled their plastic soft drink bottles; however, only 42.5% of respondents rinsed before recycling them.

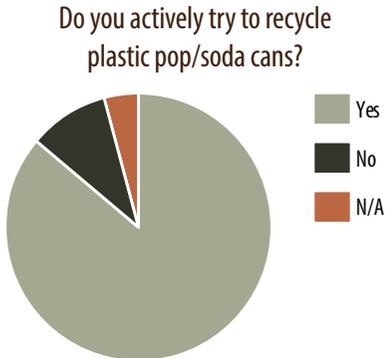


Figure 13. Chart displaying the percentage of respondents who actively try to recycle their plastic soft drink bottles

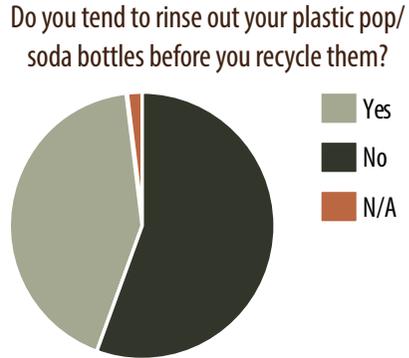


Figure 14. Chart displaying the percentage of respondents who tend to rinse out their plastic soft drink bottles.

Glass Bottles

Figures 15 and 16 describe the recycling habits and washout practices of respondents who purchase glass bottles. 78.8% of respondents actively try to recycle their glass soft drink bottles; however, only 49.4% of respondents tend to rinse out their glass soft drink bottles before recycling them. The recycling rate of glass bottles is slightly lower than that of plastics. However, this is partly because some respondents answered “Not Applicable” which indicates that some do not purchase or have ever interacted with glass soft drink beverage packaging. The washout habits of consumers are higher in glass bottles than in plastic.

Do you actively try to recycle glass pop/soda bottles?

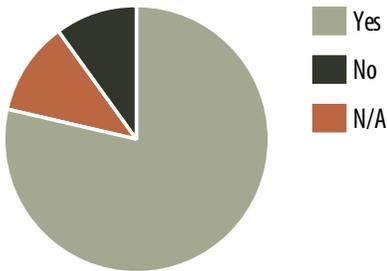


Figure 15. Chart displaying the percentage of respondents who actively try to recycle their glass soft drink bottles

Do you tend to rinse out your glass pop/soda bottles before you recycle them?

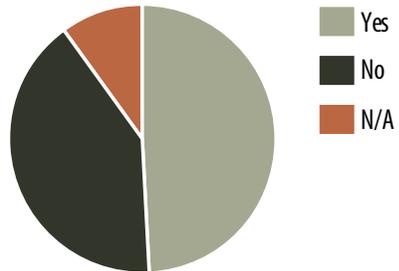


Figure 16. Chart displaying the percentage of respondents who tend to rinse out their glass soft drink bottles

Aluminum Cans

Figure 17 and Figure 18 describe the recycling habits and wash out practices of respondents who purchase aluminum cans. 86.3% of respondents actively try to recycle their aluminum cans; however, only 30% of respondents tend to rinse out their aluminum cans before recycling them. This is the lowest washout habit percentage compared to plastic bottles and glass bottles. The recycling rate of aluminum cans is slightly lower than that of plastic bottles and higher than glass bottles.

Do you actively try to recycle aluminum pop/soda cans?

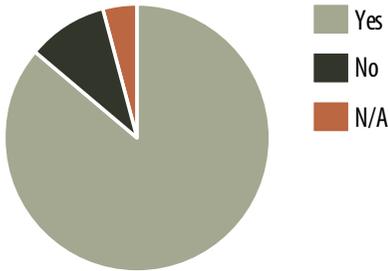


Figure 17. Chart displaying the percentage of respondents who actively try to recycle their aluminum soft drink cans

Do you tend to rinse out your aluminum pop/soda cans before you recycle them?

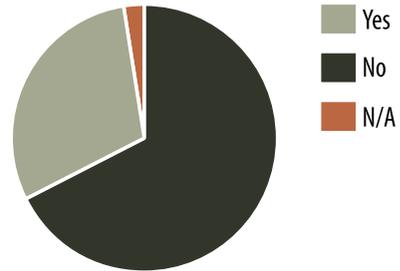


Figure 18. Chart displaying the percentage of respondents who tend to rinse out their aluminum soft drink cans

Consumer Buy Decision

Figure 19 showcases the results pertaining to consumer buy decisions. Respondents were asked to assume that each packaging option contains equal amounts of soft drink. In this instance, of the three packaging options, which option would they often find themselves purchasing? 61.3% of the respondents often purchase aluminum cans, 22.5% of the respondents often purchase glass bottles and 16.3% of consumers purchase plastic bottles.

Assume that each packaging option holds the same amount of volume. Of the three packaging options listed below, which option would you often find yourself purchasing?

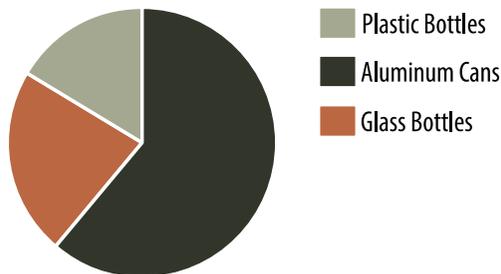


Figure 19. Chart displaying the percentage of respondents' most frequently purchased beverage packaging format.

DISCUSSION

When comparing the results from the LCA and survey, the findings are quite polarizing. The conducted LCA concludes that overall, Coca-Cola's plastic bottle beverage packaging (with plastic wrap) has the least environmental impact of all three packaging options. These findings contrast with the survey results that concluded that the majority of consumers who responded to the survey believe that Coca-Cola's plastic bottle beverage packaging has the greatest environmental impact.

Concerning the LCA, although there was an overall trend of glass packaging having a greater environmental impact than plastic packaging and aluminum packaging, the manufacturing area of glass packaging's life cycle often had a lower environmental impact than plastic and aluminum.

The Material phase, of each package's life cycle, had the most considerable role on the final environmental impact results. However, excluding the Material phase would result in varying outcomes. Looking at the Manufacturing stage and end of life phase, the manufacturing of glass bottles displayed the lowest usage of fossil fuels, GHG emissions, use of water, and DALY impact. This is most likely due to the production of glass and use of cullet.

A similar trend can be seen with the manufacturing of aluminum cans, where this packaging type had the second-lowest overall environmental impact across the four categories that were analyzed. Therefore, the manufacturing of plastic bottles has the greatest environmental impact as it uses the most fossil fuels, emits the most GHG, uses the most water, and uses the most DALY compared to glass and aluminum manufacturing. The PCR% of each package influences the manufacturing process and the End-of-Life phase.

Regarding the End-of-Life phase, all three packaging options have similar results on the four categories analyzed. The most notable difference is that aluminum cans emit significantly less GHG in the End-of-Life stage.

For packaging options such as glass and aluminum to decrease their overall environmental impact in the Material phase, a push towards more recycling efforts and increasing the recycling rate of glass bottles and aluminum cans can reduce the energy needed to extract the raw materials from its sources (Saleh, 2016). This, in theory, would lower the fossil fuel usage and emission of GHG, as less energy would be used.

In addition, after reviewing the recycling habits of consumers who responded to the survey, more than 80% of consumers responded that they actively try to recycle soda/pop bottles. However, when evaluating respondents' washout practices, 42.5% of people actively wash their plastic bottles before recycling them (Figure 14), 40.6% of people actively wash their glass bottles before recycling them (Figure 16), and a striking 30% of people actively wash their aluminum cans before recycling them (Figure 18). Recycling and washing habits of beverage packaging is an important consideration. Washing out jars, bottles or containers before recycling them is an important step that mitigates contamination as well as reduces the cost of processing the recyclables (Patel, 2018). Food or drink substances that are left inside these packages can contaminate paper fibres and other recyclable items in the mix (Patel, 2018). This jeopardizes the entire collection of recyclables and can potentially lead to the items being disposed of rather than recycled. This aspect may shed light on the findings of the End-of-Life stage of the packages' life cycle as the three packaging options had very similar results.

Although glass and aluminum beverage packaging may have resulted in higher environmental impact numbers than plastic, there are positives to both materials that cannot be fully captured through the LCA. For example, glass can be recycled, melted down, and reformed without losing strength or quality without producing harmful by-products (Emblem & Emblem, 2012). Aluminum can be re-melted, and the recycled metal can be re-melted an infinite amount of times without losing its properties (Emblem & Emblem, 2012). These aspects help in the Manufacturing phase of the LCA and the End-of-Life stage.

The contrast in scientific data versus consumers' environmental perception is quite interesting. From the survey results, it is clear that consumers believe that Coca-Cola's plastic bottle packaging has the greatest impact on the environment. With consumers rating plastic bottles' environmental impact as 7.76 (Figure 12). In comparison to aluminum cans' average environmental impact rating of 6.06 and glass bottles' average rating of 5.03 (Figure 12). One potential reasoning to this is the shift towards increasing sustainable packaging. Plastic is often presently viewed as harmful material. However many companies, the Coca-Cola Company included are making strides in becoming more environmentally conscious.

This trend can also be seen in the secondary packages used. With respondents rating the plastic shrink wrap protecting the plastic bottles, an average environmental impact rating of 8.29 out of 10 (Figure 12). Whereas the paperboard carrier for the glass packaging had an average rating of 4.31 and the paperboard packaging for the aluminum cans had an average rating of 4.51 (Figure 12). There is a consensus that overall, plastic has a greater environmental impact than any other material such as paperboard. Thus, consumer perception of plastic does not only pertain to primary packaging but any other forms of secondary packaging as well.

61.3% of respondents have revealed that they most likely find themselves purchasing aluminum cans, 22.5% have stated that they find themselves buying glass, and 16.3% responded by saying they often purchase plastic (Figure 19). These results reveal that consumers' beliefs do, in fact, impact purchasing decisions. As most respondents believed that plastic bottles have the highest environmental impact, many respondents actively decide to forgo purchasing plastic packaged beverages. However, a concerning aspect regards the wash habits of these consumers. Only 30% of overall consumers in the survey wash out their beverage cans (Figure 18). This causes an issue in the ease of recycling these aluminum cans as consumers themselves are not doing their part to contribute to being more environmentally conscious.

There is an immense problem with single-use plastics. Single-use plastics are primarily made from petrochemicals and are

intended to be thrown away after one use (Lindwall, 2020). Single-use plastics devastate oceans, wildlife and impact human health. 300 million tons of plastic are produced each year worldwide, and 50% of that is used for single-use items (Lindwall, 2020). With this perspective in mind, it is inferred that many respondents had this idea in mind when answering questions about Coca-Cola's plastic bottle packaging.

Recycling plastic more frequently would reduce its carbon footprint. PET is commonly recycled and can be turned into other products such as polyester fabrics and automotive parts. This can explain why Coca-Cola's plastic bottle made of PET overall impacts the environment the least. However, in practice, 91% of all plastic is not recycled and ends up in landfills or in the environment (Lindwall, 2020). There is a significant need for an increased effort in recycling and properly recycling plastic packages.

Although there have been several developments in recycled PET, historical practices, and treatment of plastic products have perpetuated the negative narrative of plastic PET bottles. This research highlights that consumers will continue to associate plastic products with being harmful to the environment because of single-use plastics. Single-use plastics have to be omitted to shift consumers' minds, and the implementation and narrative of recycled plastic must be pushed.

The Coca-Cola company has currently implemented 100% recycled PET bottles in 16 markets (The Coca Cola Company, 2019c). However, the North American market has not yet reached that place. Using 100% recycled PET bottles would eliminate the use of 3500 tons of virgin plastics resulting in a reduction of CO₂ emission by 25% (The Coca Cola Company, 2019c).

Shifting the North American market towards this trend would require infrastructure to meet those recycling and manufacturing demands. However, there is an ethical responsibility for companies to move towards sustainability and innovate to create more sustainable packaging. Packaging will not be going away any time soon; but there is an ethical and social responsibility for these companies to make sure that their products impact the

environment as little as possible. Not only does this pertain to the packaging they use, but also recycling and collection of the packaging materials.

Overall, pushing the world towards a circular economy where the components of a package can be recycled and used again in the manufacturing process or can be manufactured into other products would be an ideal situation. Although this LCA has shown that plastic packaging overall has the least impact on the environment, this should not be the stopping point. Instead, it should be a motivating factor to influence change towards better implementation of material creation, manufacturing, recycling as well as consumer practices.

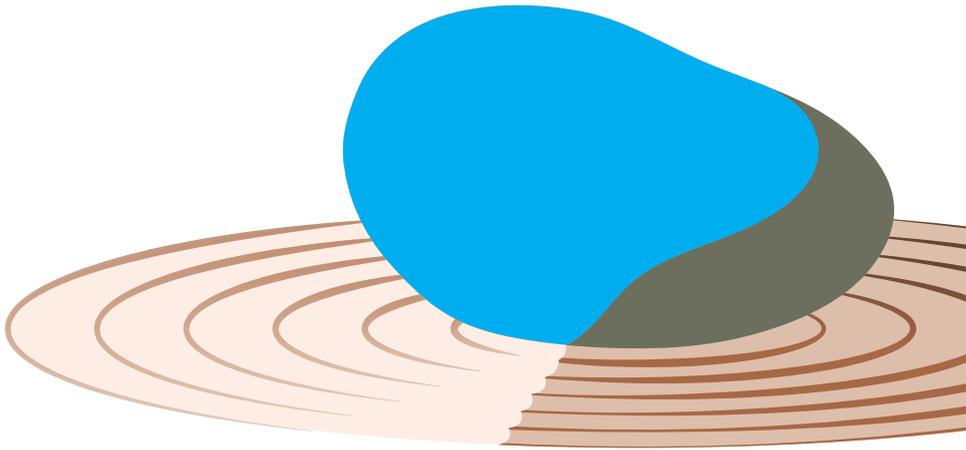
CONCLUSION

To conclude, environmental consciousness and sustainability has been an increasing factor in today's society. Consumers have instilled an ethical and social responsibility for companies such as The Coca-Cola Company to innovate and create packaging that provides the least amount of harm to the environment.

The results of the LCA methodology suggested that Coca-Cola's packaging system for their plastic bottles overall showed the least environmental impact followed by their aluminum cans and lastly their glass bottle packaging systems. These packages were evaluated on, fossil fuel usage, greenhouse gas emissions, water usage and human impact.

A survey was conducted to evaluate consumers' environmental impact perception on Coca-Cola's packaging. Respondents rated each primary and secondary packaging based on a scale of 1 to 10, 1 being the package has the least environmental impact, and 10 being the package has the greatest environmental impact. The results of this survey expressed the opposite of the LCA results. Respondents believed that overall, Coca-Cola's plastic bottle packaging and its plastic shrink wrap has the greatest environmental impact. The recycling habits, wash out practices, and consumer buy preferences were also surveyed.

Further analysis of the results suggests that plastic packaging has a negative connotation due to historical malpractices and the existence of single-use plastic. For there to be a shift in consumer perception, companies can implement more recycled plastic into their packaging, spread awareness around this topic and enhance their packaging designs to reflect these changes. However, there is also a need for more efficient recycling systems, a reduction in the use and manufacturing of single-use plastics, a movement towards creating circular economies and helping consumers understand how to recycle packaging properly.



REFERENCES

- American Forest & Paper Association (n.d.) Paper-Based Packaging.
<https://www.afandpa.org/our-products/paper-based-packaging/paperboard>
- Dam, Y. (1996). Environmental assessment of packaging: The consumer point of view.
Environmental Management, 20(5), 607–614.
<https://doi.org/10.1007/BF01204134>
- Del Rosso, E. (2020). Environment is King: Sustainability in the Food & Beverage Industry.
<https://medium.com/dashmote-snapshot/environment-is-king-sustainability-in-the-food-beverage-industry-c0215194178c>
- Emblem A. & Emblem H. (2012). *Packaging Technology - Fundamentals, Materials and Processes*. Elsevier.
<https://app.knovel.com/hotlink/toc/id:kpPTFMP001/packaging-technology/packaging-technology>
- Lindwall, C. (2020, July 30). Single-Use Plastics 101.
- McCombes S. (2019). How to write a literature review.
<https://www.scribbr.com/dissertation/literature-review>
- Niero M., Hauschild M.Z., Hoffmeyer, S.B., & Olsen, S.I (2017). Combining Eco-Efficiency and Eco-Effectiveness for Continuous Loop Beverage Packaging Systems: Lessons from the Carlsberg Circular Community. 21 (3), 742-753.
[doi-org.ezproxy.lib.ryerson.ca/10.1111/jiec.12554](https://doi.org/10.1111/jiec.12554)
- North American Packaging Association. (2019). 4 Types of Paperboards.
<https://paperbox.org/4-types-of-paperboard/>
- Patel, A. (2018). The biggest recycling mistakes Canadians continue to make. <https://globalnews.ca/news/4153053/biggest-recycling-mistakes>
- Saleh, Y. (2016). Comparative life cycle assessment of beverages packages in Palestine. *Journal of Cleaner Production*. 131, 28-42. doi:10.1016/j.jclepro.2016.05.080

- Simon B, Amor M.B. & Földényi, R. (2016). Life cycle impact assessment of beverage packaging systems: focus on the collection of post-consumer bottles. 112, 238-248. <https://doi.org/10.1016/j.jclepro.2015.06.008>
- The Coca-Cola Company. (2019a). 2019 Q4 Earning Releases. https://d1io3yog0oux5.cloudfront.net/_70cd244d9ae19eeadf93f8c839f2a22c/cocacolacompany/news/2020-01-30_Coca_Cola_Reports_Strong_Growth_in_Fourth_Quarter_981.pdf
- The Coca-Cola Company. (2020b). What are Coca-Cola bottles and cans made of? <https://www.Coca-Cola.co.uk/our-business/faqs/what-are-Coca-Cola-bottles-and-cans-made-of>
- The Coca-Cola Company. (2019c). 2019 Business and Sustainability Report. <https://www.Coca-Colacompany.com/content/dam/journey/us/en/reports/Coca-Cola-business-and-sustainability-report-2019.pdf>
- Whelan, T., & Kronthal-Sacco, R. (2019). Research: Actually, Consumers Do Buy Sustainable Products. <https://hbr.org/2019/06/research-actually-consumers-do-buy-sustainable-products>



APPENDICES

Appendix A

Convergent Factor and Functional Unit Calculations

Table 10. Convergent Factor Calculations of Primary Packages

PACKAGING COMPONENT	FUNCTIONAL UNIT (mL)	VOLUME CAPACITY OF PRIMARY PACKAGE	CONVERGENT FACTOR (# OF BOTTLES TO FILL 1000 L AND # OF CLOSURES TO SEAL X NUMBER OF BOTTLES)	WEIGHT OF PRIMARY PACKAGING COMPONENT (g)	NET WEIGHT OF PRIMARY PACKAGES TO FILL 1000 L (g)
Plastic Bottle	1000000	710	1408	26	36608
Plastic Cap	1000000	N/A	1408	2	2816
Glass Bottle	1000000	237	4219	148	624412
Aluminum Crimped Crown	1000000	N/A	4219	2	8438
Aluminum Can	1000000	355	2816	12	33792
Aluminum Tab	1000000	N/A	2816	1	2816

Table 11. Convergent Factor Calculations of Secondary Packages

PACKAGING COMPONENT	CONVERGENT FACTOR	# OF PRIMARY PACKAGES IN ONE SECONDARY PACKAGE	CONVERGENT FACTOR (# OF SECONDARY PACKAGES TO PACKAGE X NUMBER OF PRIMARY BOTTLES)	WEIGHT OF SECONDARY PACKAGING COMPONENT (g)	NET WEIGHT OF SECONDARY PACKAGE TO PACKAGE 1000 L (g)
Plastic Wrap	1408	6	234	16	3744
Plastic Cap	4219	6	703	57	40071
Glass Bottle	2816	12	234	92	21528

Appendix B

Weights and Dimensions of Packages

Table 12. Weight of Coca-Cola's Classic PET Plastic Bottle (710 mL)

	PRIMARY PACKAGING (NON-FILLED SINGLE PLASTIC BOTTLE WITH CAP AND LABEL)	PRIMARY PACKAGING (NON-FILLED PLASTIC BOTTLE)	PRIMARY PACKAGING (POLYPROPYLENE CAP)	PRIMARY PACKAGING (PET LABEL)	SECONDARY PACKAGING (PET SHRINK WRAP)	PRIMARY PACKAGING AND SECONDARY PACKAGING (6 FILLED BOTTLES)
Weight of Package (g)	29	26	2	1	16	4639

Table 13. Dimensions of Coca-Cola's Classic PET Plastic Bottle Packaging

	PRIMARY PACKAGE (SINGLE PLASTIC BOTTLE WITH CAP AND LABEL)	SECONDARY PACKAGE (6 PRIMARY PACKAGES)
Dimensions of the Package	2.75" x 2.75" x 10.25"	6" x 9" x 10.375"

Table 14. Weight of Coca-Cola's Classic Glass Bottle Packaging (237 mL)

	PRIMARY PACKAGING (NON-FILLED SINGLE GLASS BOTTLE WITH CAP)	PRIMARY PACKAGING (NON-FILLED SINGLE GLASS BOTTLE)	PRIMARY PACKAGING (ALUMINUM CROWN)	SECONDARY PACKAGING (PAPERBOARD)	PRIMARY PACKAGING AND SECONDARY PACKAGING (6 FILLED BOTTLES)
Weight of Package (g)	150	148	2	57	2447

Table 15. Dimensions of Coca-Cola's Classic Glass Bottle Packaging

	PRIMARY PACKAGE (SINGLE PLASTIC BOTTLE WITH CAP AND LABEL)	SECONDARY PACKAGE (6 PRIMARY PACKAGES)
Dimensions of the Package	2.125" x 2.125" x 7.25"	4.625" x 7.875" x 7.875"

Table 16. Weight of Coca-Cola's Classic Aluminum Can Packaging (355 mL)

	PRIMARY PACKAGING (NON-FILLED SINGLE ALUMINUM CAN WITH CLOSURE)	PRIMARY PACKAGING (NON-FILLED SINGLE ALUMINUM CAN)	PRIMARY PACKAGING (ALUMINUM CLOSURE)	SECONDARY PACKAGING (PAPERBOARD RECTANGLE)	PRIMARY PACKAGING AND SECONDARY PACKAGING (12 FILLED CANS)
Weight of Package (g)	13	12	1	92	4695

Table 17. Dimensions of Coca-Cola's Classic Aluminum Can Packaging

	PRIMARY PACKAGE (SINGLE ALUMINUM CAN)	SECONDARY PACKAGE (12 PRIMARY PACKAGES)
Dimensions of the Package	2.5" x 2.5" x 5"	5.25" x 15.625" x 4.875"

Appendix C

Survey

Coca Cola's Packaging Survey

Hi! I'm Jessica Hoyth (jhoyth@ryerson.ca), a 4th year student at GCM. Thank you for participating in this short survey about Coca Cola's packaging! This survey will take about 3 - 5 minutes to complete. Participation in this survey is optional. No personal information (e.g. name and email address) is collected. All responses are anonymous. If you wish to participate, please fill out the survey below and click "Submit" when you are done. Your response will contribute to my thesis research which investigates the environmental impacts of Coca Cola's packaging, as well as it investigates consumers' sustainability perception.

[jhoyth@ryerson.ca](#) (not shared) [Switch account](#)

Required

How old are you? *

- 17 or younger
- 18 - 24
- 25 - 29
- 30 - 39
- 40 - 49
- 50 - 59
- 60 +
- I prefer not to say

On a scale of 1 to 10, please rate the environmental impacts of Coca Cola's plastic bottle packaging sold in North America. *

1 2 3 4 5 6 7 8 9 10

Least environmental impacts Greatest environmental impacts

Do you actively try to recycle plastic pop/bottle bottles? *

- Yes
- No
- Not Applicable

Figures 1-2. Survey Questions 1-2.

Do you tend to rinse out your plastic pophoda bottles before you recycle them? *

Yes
 No
 Not Applicable

On a scale of 1 to 10, please rate the environmental impacts of Coca Cola's plastic wrap packaging sold in North America. *



1 2 3 4 5 6 7 8 9 10

Least environmental impacts ○○○○○○○○ Greatest environmental impacts

On a scale of 1 to 10, please rate the environmental impacts of Coca Cola's glass bottle packaging sold in North America. *



1 2 3 4 5 6 7 8 9 10

Least environmental impacts ○○○○○○○○ Greatest environmental impacts

Do you actively try to recycle glass pophoda bottles? *

Yes
 No
 Not Applicable

Do you tend to rinse out your glass pophoda bottles before you recycle them? *

Yes
 No
 Not Applicable

On a scale of 1 to 10, please rate the environmental impacts of Coca Cola's paperboard carrier packaging sold in North America. *



1 2 3 4 5 6 7 8 9 10

Least environmental impacts ○○○○○○○○ Greatest environmental impacts

On a scale of 1 to 10, please rate the environmental impacts of Coca Cola's aluminum can packaging sold in North America. *



1 2 3 4 5 6 7 8 9 10

Least environmental impacts ○○○○○○○○ Greatest environmental impacts

Do you actively try to recycle aluminum pophoda cans? *

Yes
 No
 Not Applicable

Do you tend to rinse out your aluminum pophoda cans before you recycle them? *

Yes
 No
 Not Applicable

On a scale of 1 to 10, please rate the environmental impacts of Coca Cola's paperboard rectangular packaging sold in North America. *



1 2 3 4 5 6 7 8 9 10

Least environmental impacts ○○○○○○○○ Greatest environmental impacts

Assume that each packaging option holds the same amount of volume. Of the three packaging options listed below, which one of these do you believe has the greatest environmental impact? *



Plastic Bottles
 Glass Bottles
 Aluminum Cans

Assume that each packaging option holds the same amount of volume. Of the three packaging options listed below, which option would you then prefer to purchase? *

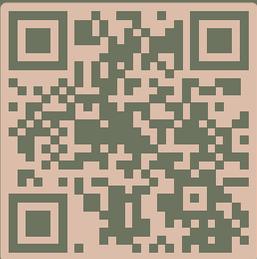
Plastic Bottles
 Glass Bottles
 Aluminum Cans

Figures 3-8. Survey Questions 3-8.

02

Fast Food Takeout Packaging: Choose Your Fighter!

Chehek Vohra





ABSTRACT

Materials play a big impact on the type of fast-food packaging available in today's market as many of them are harmful for the environment. Single use takeout containers are prevalent in today's society and can be seen used by many big brands. The impacts these materials have on the environment and the factors that affect them are important to consider. The study evaluates popularly used materials to investigate the design of packaging and compare it to the production and disposability aspects to gain a deeper understanding of the impacts that has. Thorough research was conducted to truly understand the materials, their processes and their usability. The original hypothesis was that the more natural products would perform well. However, the results showcase that the most synthetic material is Expanded Polystyrene foam to be the most recyclable by consumers. The results suggest that most natural material end up in landfills due to not having the proper facilities available for material disposal.

INTRODUCTION

The fast-food industry has become increasingly popular within the last few years (Razza et al., 2009). The convenience of sitting home and ordering food through phone apps such as *Uber Eats*, *Door Dash* and *Ritual* offers various options to the consumer. In the current climate of COVID-19, it is safer to pick up or order food. It has become increasingly convenient for the consumer to get fast-food. However, there have been few studies about the environmental implications of fast-food packaging. Some of the most common materials are quite harmful and non-recyclable. Fast-food companies should consider the impacts their takeout packaging has on the environment with the increasing need for sustainable options in a growing market. Since the fast-food industry offers many different food options, they also have many other single-use food packaging. The evaluation of these materials is important to determine the impacts that they have.

A few critical areas related to single-use takeout containers are their disposability, usability, and external factors such as printing processes. These areas need to be investigated in popular fast-food brands for consumers to make educated decisions about their consumption. The consumer perception due to greenwash marketing has shifted to assume that more “natural” based products such as paper, paperboard and compostable fibers are the better alternative to the more synthetic expanded polystyrene foam or mixed insulated aluminum foil paper. However, no study has compared these elements to each other on the same basis. This paper will be comparing the materials on their production, material, packaging type, characteristics, usability, printing process and disposability properties. It will also state the brands that use the packaging and compare their marketing of sustainable values to the packaging that they use. The geographical location selected for this paper was the Peel and Toronto Regions.

LITERATURE REVIEW

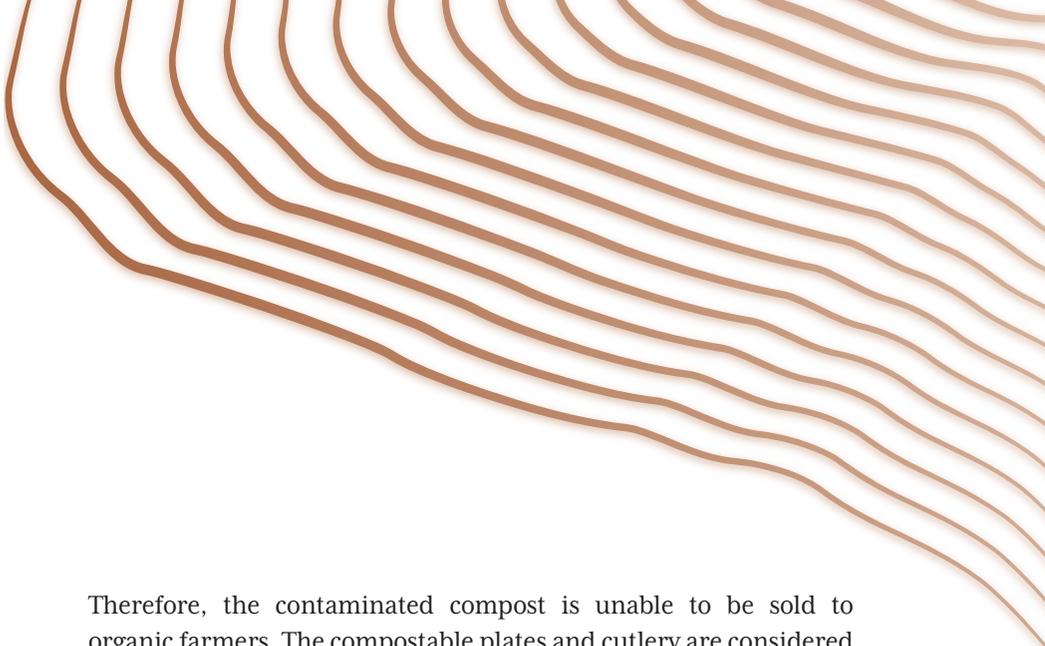
Single-Use Materials

In the last decade, fast takeaway food consumption has dramatically increased, caused by its level of convenience and competitive pricing. This rise in consumption has subsequently caused an increase in the use and disposal of packaging for takeaway food items, which raises a concern for the environmental impacts of single-use take out containers. Single-use takeout packaging comprises multiple different materials, including polypropylene and polystyrene, both of which are not directly recyclable. In Gallego-Schmid, Mendoza & Azapagic's (2019) article "Environmental Impacts of Takeaway Food Containers", the authors compare the life cycle impacts of the three most widely-used types of takeaway containers: aluminum, polypropylene, and extruded polystyrene, to the use of a reusable container. A Life-Cycle Analysis of these materials is conducted to find the best available alternatives (Gallego-Schmid et al., 2019). The analysis investigates raw material, packaging, production, transportation, use, and end-of-life management. The analysis results show that the EPS- Expanded Polystyrene Foam containers have the lowest environmental impacts and are the better option in a single-use when compared to reusable containers. The study found that the reusable containers were only better if they were used more than 18 times. The disposable polypropylene containers must be reused five times to be considered to have the lowest environmental impact (Business Insights, 2018). Regardless of how the LCA showcases the EPS containers, many external factors cannot be measured in the software, such as littering and the effects of EPS in marine environments. The research focuses on analyzing the materials and does not cover the characteristics that make them unique and useful; it does not address the printing processes that will affect the life cycle.

Compostable Materials

There is a misconception that compostable packaging is better for the environment in comparison to other single-use packaging materials. In Wozinkaca's (2020) "The Dark Side of Compostable Takeout Containers", the reader learns more about the increasingly used plastic alternatives. Compostable food packaging is composed of plant-based materials; it is designed to be biodegradable and disposed of with the compost waste. Countries have started to charge more for their single-use disposable plastic food packaging (Wozniacka, 2020). There has been more awareness about the negative impacts of plastic and how it affects the environment. The detrimental effects brought to light are that plastic materials kill animals when disposed of in wildlife areas. Plastics also release harmful greenhouse gases when exposed to sunlight, degrading the environment and most importantly, they take hundreds of years to break down. (Marine Safe, 2015). To combat this, companies have been searching for more plant-based, compostable food packaging and are making the switch to create change. The idea behind the compostable packaging is to use single-use plates, bowls, and cutlery so that the consumer can compost their food-soiled dinnerware. Composting, in turn, reduces the food waste as it breaks down into the soil, nourishing the earth instead of polluting it.

Despite this attempt to create an environmentally friendly solution, There are still issues with compostable and recyclable packaging. In the current climate of companies switching to more sustainable options, there has been an influx in the disposal of compostable materials (Wozniacka, 2020). However, there are many flaws in the system; a key one being that compost facilities cannot accept the compostable products, as the materials might compromise the compost's integrity. The issue here is that consumers do not educate themselves before deciding to become sustainable and mix in items that are not compostable with the compost waste. Every municipality also has a different waste system and may not accept the waste, leading to more waste being sent to landfills. This increases the cost of operating when the materials need to be sorted out, which is not practical since many synthetic materials are mixed in.



Therefore, the contaminated compost is unable to be sold to organic farmers. The compostable plates and cutlery are considered synthetic materials as they tend to have chemical coatings or polyfluoroalkyl substances (PFAS). The chemicals are highly toxic and can be transferred into the soil and waterways, making them unsafe to farm or consume (Razza et al., 2009, p.1433).

Harmful Chemicals in Packaging

In today's society, many consumers are unaware of the toxic chemicals that are in fast-food packaging. The majority of fast-food packaging is coated in a grease-resistant chemical that can be absorbed by the food. In the article "Toxins in Your Fast-Food Packaging? Boxes, wrappers found to contain harmful fluorinated chemicals", it is stated that the packaging contained detectable PFASs. That PFASs leech into the food with the assistance of heat and grease (Thompson, 2017). PFAS are also linked to many medical issues. Most fast-food packaging contains these chemicals, including paper wrappers, french fry boxes and compostable containers. In cases where facilities accept the food packaging for compost, there are many PFAS contaminants (Chrobak, 2019). Due to the highly toxic nature of the chemicals when composted, they contaminate the soil, making it unsuitable for organic farming and overall harmful to the environment. Therefore, these

containers cannot properly break down into the environment as they were designed due to the coatings (Thompson, 2017).

Overall, in analyzing the existing literature on fast-food takeout packaging and its environmental effects, a gap presents itself; no research looks into all of the materials at once to accurately compare them and understand them on a similar level. Many external factors can affect how sustainable materials and a lack of education that the average consumer has an impact on their fast-food choices. Understanding the materials on a standard level will effectively give us a better overview of the characteristics of the material and how it should be used, how to dispose of them, and if it is the most sustainable option.

METHODOLOGY

The research focused on evaluating different materials that are used in fast-food packaging while seeking the material that is the most sustainable. Most take out packaging tends to be single-use, and therefore creating much waste. These packaging options are commonly composed of materials that are not sustainable options that are available to the general public. The methodological approach that is going to be used to evaluate the sustainability of these materials was based on the characteristics that they possess, and they were compared to find which material is the most suitable for mass use. The areas that will be assessed are how the product is being generally used - what material components it consists of, the packaging design that it uses, the disposability of the packaging materials, and if there is any printing involved, how sustainable it is.

Evaluation Criteria:

General

The packaging type's general use is essential to evaluate, as it showcases how the packaging is used. The packaging characteristics make it the most suitable for different food types, temperature, and packaging design. The packaging design is an important component, as it implements the materials' strengths into general

usability. Using the knowledge of the materials and creating a packaging type that works for a variety of food products. Another avenue that will be explored is packaging production, it is essential to evaluate how the packaging was produced to see how economic, and environmentally friendly the process is. These characteristics will contribute to the overall sustainability of the product.

Printing Process

An essential factor in the graphic communications industry is the visibility of branding. Many big-named fast-food companies tend to have their takeout packaging branded. This aspect investigates if the material can withstand the printing process it undergoes. Each printing method has its environmental impacts. It is essential to assess the printing method used to brand packaging and see how sustainable it is.

Disposability

Recyclability

The evaluation of how recyclable the material is will be researched. This aspect will indicate how easily the general consumer can dispose of the specific material and how the material goes through to be recycled. Recycling helps reduce the environmental impact that is prevalent in society. If a material can be recycled, it helps cut down the negative contributions of its disposal. Some materials are also recyclable on their own, but when contaminated with biowaste, they cannot be recycled and therefore have to be disposed of through the general waste system. The purpose of this evaluation is to see which materials can be recycled, how they are recycled, where they are recycled and if not recycled, how are they disposed of and what are their contributions to the environment.



Compostability

The evaluation of whether the materials used in the package are compostable. This aspect is crucial as it would demonstrate if the consumer can dispose of the packaging into their compostable waste facility. Some items are advertised as compostable but a lot of cities do not have the facilities to compost them. Therefore, many of these items are sorted into the general waste system and do not perform as they are designed to. However, it is important to note bigger compostable packaging items, can go into the compost bins and be composted with food waste.

Usability

The packaging must be able to perform well for what it is designed for. Evaluating the product's usability entails assessing the food product's security, the thermal protection that it provides, and its overtime storage. These are the main characteristics that are needed in takeout packaging. In the current climate, food safety is critical, the packaging should protect the edible and perishable items from debris and any other external factors. The packaging should regulate temperature, keeping hot foods warm. In cases where consumers purchase fast-food in bulk and store it, the packaging should be kept as a storage container for a few days without being damaged or beginning to decay.

Evaluating the different materials of these characteristics is derived from research. To find the general use of different materials, research on popular fast-food/takeout brands and what packaging materials they are composed of was conducted. Several kinds of takeout food containers were purchased, and the packaging was evaluated to determine the printing process, materials used and storage time by assessing if the packaging starts decaying/losing its shape. Assessing the disposability involved exploring municipality waste sorting websites, such as Waste Wizard for the City of Toronto and How to Sort Your Waste application on the Region of Peel website to get a strong comparative analysis of which items can be composted, recycled or sent to general waste. The item's usability and printing process was tested through thorough research on branding and the package's general public use.

The following chart illustrates the questions that are set to be answered throughout the research process:

Table 1. Research Process Questions

CHARACTERISTIC	ANALYSIS ASSISTING QUESTION
General	What is the material name? What is the composition of the material? How is it produced? What packaging does it make? How does it look? What are the uses of the packaging? What temperature can the materials hold? Which brands use this packaging?
Printing Process	Can the packaging be printed on? What printing process is used? Does the printing have any finishings?
Disposability	How are the materials disposed of? Is the material recyclable? Is the material compostable? Is there a disposal facility in Toronto? Where can the materials be disposed of?
Usability	How is the packaging used? Does it perform well to contain fast-food? Does it maintain the temperature adequate for food storage? Can it be used for overnight storage?



RESULTS

Expanded Polystyrene Foam (EPS)

Table 2: Expanded Polystyrene Foam Analysis Results

CHARACTERISTIC	ANALYSIS
General	Expanded Polystyrene Foam (EPS) is the material that is generally known as either Styrofoam or Thermocol. This versatile material is created by fusing low-density polystyrene with ethylene and benzene's main chemical components (Chemical Safety, 2020). EPS containers are mainly moulded into a cylindrical shape, or a clamshell closed box container. The cylindrical styles have a cup style design that tends to have separate lids usually made of plastics; these containers come in many different sizes and are designed to hold varying amounts of food. The design is also very efficient in holding liquids as it is moisture resistant and is often used for soups and sauces. The clamshell containers are designed with two sides and a latch to close and use EPS material throughout. The container can come in various sizes and have internal compartments to separate different foods. The container is ideal for many types of foods as long as it is held upright. These containers come in many colours but more commonly manufactured as white and are very lightweight. The material also keeps the food warm as it is made out of Polystyrene and does not allow heat to pass through it, and is suitable for insulation (Alexander, 2020). Many brands use the packaging, it can be seen in big fast-food brands such as <i>Osmows</i> , <i>Lazeez</i> , <i>Ali Baba</i> , and <i>Panda Express</i> .
Printing Process	The package cannot be printed on. The inks' solvents tend to melt/etch into the container (Ink Tank, 2019). The material can be embossed.

- Results continue on the next page -

Disposability

The EPS material can be recycled with proper cleaning. The material must not have any food waste when set for recycling. However, there is no facility in Toronto that recycles EPS as it is very costly (Chung, 2018).
The recycling for Polystyrene is not a closed-loop system. The packaging is repurposed into packaging fillers and trays (Chung, 2018).

Usability

The packaging is used for food storage, it is mainly used in Asian cuisine fast-food packaging and many Mediterranean foods. The packaging can be used to contain hot foods and can maintain a warm temperature within. The packaging can be microwaved however, it is not recommended.
The packaging can contain takeout foods overnight without decaying and depending on the food it can keep items fresh for a long time. Foods high in oil leave residue and cannot be washed out thoroughly and seep into the container.

Insulated Aluminum Foil Paper

Table 3: Insulated Aluminum Foil Paper Analysis Results

CHARACTERISTIC	ANALYSIS
General	<p>The insulated aluminum foil paper is a combination of flattened aluminum and paper. The aluminum materials are hard to attach and so are done using food-safe adhesive and heat; with the substrate being fragile, the heat's temperature needs to be low (Jowat Klebstoffe, 2019). The packaging that are made from these materials are food wrappers and food wrapper bags. The packaging is paper on the outside and aluminum on the inside. It is ideal for maintaining a warm temperature and insulating the food due to aluminum's nature. We see this packaging being used in sandwiches, wraps and small hot bite foods. A few of the big brands that use the packaging are <i>Popeyes</i>, <i>Chick-Fil-A</i>, <i>Wendy's</i>, <i>Osmows</i> and <i>Lazeez</i>. Many small local fast-food brands use the packaging for the same food items.</p> <div data-bbox="460 751 904 945"></div> <p data-bbox="506 967 858 994">Figures 1-2. <i>Popeyes Chicken Sandwich bags</i></p>
Printing Process	<p>The packaging can be printed on. The <i>Popeyes</i> insulated aluminum paper bag is printed using flexography, commonly used for paper packaging.</p> <div data-bbox="583 1136 778 1330"></div> <p data-bbox="575 1342 789 1370">Figure 3. <i>Flexography Print</i></p>

- Results continue on the next page -

Disposability

The insulated aluminum foil paper cannot be recycled. It is made up of two materials and an adhesive, the materials are unable to break down. The material is also contaminated by food waste and oils. The item goes to garbage in Peel and Toronto (Waste Wizard, n.d.).

Usability

The packaging is used to contain hot foods, mainly sandwiches. The *Popeyes* bag was evaluated and it was able to perform well in containing the food, as well as maintaining the temperature, however, there was a lot of built-up condensation as the heat was unable to exit making the food within a little soggy. The longer the food stays within the heat the worse it gets. The packaging can be used for overnight storage however it is unable to be reheated in the microwave as it is unsafe to heat aluminum, it is also unable to be reheated in the oven as there is paper packaging on the outside. The packaging is physically able to contain foods for a long period of time.

Plastic Coated Paper

Table 4: Plastic Coated Paper Wrappers Analysis Results

CHARACTERISTIC	ANALYSIS
General	<p>Plastic-coated paper is a material made up of paper/paperboard, water and grease-resistant coating that consists of plastics (Andrews & Walker, 2017). The plastics that coat the materials are more formally known as PFCs (perfluorocarbons). The plastic-coated wrappers are mainly seen used in sandwich and burger packaging but can also be folded and used as paper bags for food items. The paper wrappers are used by brands such as <i>McDonald's</i>, <i>Popeyes</i>, <i>Subway</i> and <i>Burger King</i> as well as many local brands that sell sandwiches, burgers and somewhat greasy foods (Hall, 2020). The coated paper tends to be printed on and has the brand's logo or graphics on the outside and is shiny and smooth on the inside. The material is also very thin and can be translucent. The packaging is able to keep the product warm, when the contents of the packaging are too warm condensation builds and causes the food to absorb it.</p>
Printing Process	<p>The plastic-coated paper wrappers can be printed on. They are commonly printed using flexography.</p> <div data-bbox="468 883 877 1033"></div> <p data-bbox="560 1041 796 1068">Figures 4-5. Flexography Print</p>
Disposability	<p>The materials are able to be recycled however does the nature of the food that is contained, the grease that touches the wrappers makes it unable to be recycled. The materials are unable to be recycled in Peel or Toronto (Waste Wizard, n.d.).</p>
Usability	<p>The packaging is used to wrap around the food item, the purpose behind the packaging is to be able to eat food without the grease contaminating your hands. The packaging is able to contain and protect food overnight however it easily lets the food dry due to not having any proper barriers.</p>

Paperboard

Table 5: Paperboard Analysis Results

CHARACTERISTIC	ANALYSIS
General	<p>Similar to the plastic-coated wrappers the paperboard containers are also coated in PFC's. The material is a thin paperboard and is then coated and folded into its desired shape. Paperboard is commonly made from wood pulp, straw or wastepaper, there are many compositions of the material (Britannica).</p> <p>The material can be folded into a box shape, into an open container shape or be cut and folded into any shape required, for example, the <i>McDonald's</i> french fry container. The containers then use adhesives to keep the containers in shape. If the container is in a box shape, they usually have a hinge that keeps the container locked. The containers come in many different sizes and are usually white or brown (Kraft). The material can be used in many different cuisines as it is very flexible with the shape that is created. For example, in the <i>Popeyes</i> box container, there are a few sizes of the box that can hold different things but they are all horizontally narrow rectangular boxes with a few perforated holes. Similarly, there is customization in other cuisine areas, for restaurants such as <i>Thai Express</i> the same material is used and is vertically narrow and contains a locking component at the top as well as sometimes these packaging have plastic or metal handles that enable them to be held from the top. The packaging is heat sensitive, the material is moisture sensitive and can lose its integrity when there is too much humidity (Marsh & Bugusu, 2007).</p>
Printing Process	<p>The paperboard packaging is able to be printed on. They are mainly printed on with the flexography printing process. Finishings are possible with this type of printing method but are not typical (Marsh & Bugusu, 2007).</p> 

Figure 6. Flexography Print

- Results continue on the next page -

Disposability

The paperboard containers that are coated with PFCs are recyclable, however due to the contamination with grease and sauces they are unable to be recycled (Marsh & Bugusu, 2007). The nature of most fast-food is that they contain a lot of grease and sauces and therefore taint the recyclability of the product. The materials are not available to be recycled in Peel or Toronto (Waste Wizard, n.d.).

Usability

The packaging is used for containment, in the fast-food industry we see it being used for many different cuisines and food types. There are many options available but the packaging is not suitable for holding more liquid/sauce consistency as the container is moisture sensitive and can be ruined (Marsh & Bugusu, 2007). The containers are able to hold warm temperatures however the moisture that is created within can weaken the durability of the packaging. The packaging can be used for overnight storage and is able to be reheated in a microwave.

Compostable Fiber

Table 6: Compostable Fiber Analysis Results

CHARACTERISTIC	ANALYSIS
General	<p>The compostable fiber material is made up of all-natural fibres from cane sugar, potato and corn resin. The material is then moulded into the desired shape. The container is usually light brown and shaped like a bowl, a box with lids, or a clamshell container. The materials are also sometimes coated in PFC's to maintain their integrity. The containers are often accompanied by lids made up of plastic, aluminum or composite fibres. The containers are able to hold hot foods. The material tends to degrade over time (Genpak, 2020). The brands that use the packaging are <i>Chipotle</i>, <i>Freshii</i>, <i>Costco</i> and <i>Pita Land</i>.</p>  <p>Figure 7-8. <i>Chipotle Compostable Bowls</i></p>
Printing Process	The packaging is not able to be printed on.
Disposability	The compostable fibres containers are compostable unless they are coated with PFCs. Currently, all big fast-food brands use containers with PFC coatings and cannot be processed through the composting facility. The materials have to be disposed of with the general waste in Peel and Toronto.
Usability	The packaging is used mainly for salads, rice bowls, and fried foods that don't have a lot of liquid in them. The containers perform well in the fast-food environment but are very niche to the brands that advertise themselves as "green". The container does not work well with any moisture as it penetrates through the fibres and reduces its structural integrity. The box can be used overnight when it contains dry foods. It does not maintain a warm temperature but the lids and closures help in maintaining the temperature. The container can be reheated in a microwave.

Disposability

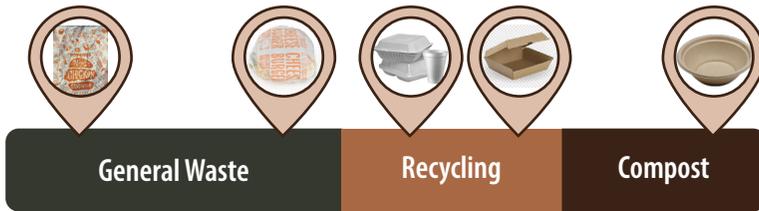


Figure 9. Visual Graph of Disposability Results



Figure 10. Visual Graph of Printing Process Results

DISCUSSION

Expanded Polystyrene Foam (EPS)

The packaging created from the EPS material is very easily accessible. EPS often holds Asian and Mediterranean foods. The foods need packaging that can hold liquids, compartmentalize foods and carry various quantities. The packaging is also lightweight and cost-effective when bought in bulk and does not spoil over time. The EPS packaging has all the right characteristics that make it an ideal candidate for mass take out brands. However, it is one of the materials that are not very environmentally friendly. Although Polystyrene is recyclable, it is a costly open-looped process. The recycling facility will only accept items that are clear and rinsed and will not accept items that are made of black foam. To reuse the materials, it requires additional resources and causes an increased pollution rate to transform the materials into packaging fillers and cafeteria trays. As the material is cheap, the cost of recycling is far more extensive, making it monetarily unsustainable to recycle.

The packaging ends up in landfills or is incinerated. Due to EPS' lightweight nature, the packaging tends to fly away and ends up in areas with wildlife and waterbodies. Marine animals and birds confuse broken down EPS pieces as a source of food and ingest it. EPS is cost-friendly and works for many different food types; however, it affects the environment. This material is difficult to recycle, toxic and can easily be ingested by animals. The brands that use this packaging tend to have a larger volume of food, the brands are not gearing towards a sustainable marketing view rather a bulky meal on a budget.

Table 7: Advantages and Disadvantages of EPS

ADVANTAGES	DISADVANTAGES
<ol style="list-style-type: none"> 1. Lightweight 2. Ease of use 3. Thermal protection 4. Overtime storage 5. Cheap 	<ol style="list-style-type: none"> 1. Expensive to recycle 2. Toxic chemicals 3. Not ideal for heating 4. No printing 5. Not easy to clean up contaminants 6. Harms wildlife

Insulated Aluminum Foil Paper

The packaging created out of insulated aluminum paper is often not seen in fast-food packaging. It is very well insulated and produced, therefore of a higher quality. It is mainly seen used in warm/hot sandwich and burger packaging. As the packaging keeps the food warm, the steam cannot escape and forms condensation: the packaging can ruin the food's texture and make it soggy. The product is put together by gluing aluminum to paper and is printed on using the flexography printing process. The packaging cannot be recycled and has to be thrown away with the general waste due to adhesives and food contamination. The packaging would be recycled if the material could be separated; however, to reuse the materials, it requires more resources and therefore, causes an increase in pollution. As the material is hard to separate, the cost of recycling is far more extensive and inefficient, making it monetarily unsustainable to recycle. As the materials are very light, they can be

blown away and can end up in areas of wildlife and contaminate the environment. The big rival brands that use this packaging are *Popeyes* and *Chick-fil-a*. Both of their brand values are to celebrate their heritage and traditions. Their mission is not to aim for sustainability but to serve delicious food and keep it hot and fresh.

Table 8: Advantages and Disadvantages of Insulated Aluminum Paper

ADVANTAGES	DISADVANTAGES
<ol style="list-style-type: none">1. Thermal protection2. Lightweight3. Can be printed on4. Ease of use	<ol style="list-style-type: none">1. Expensive to recycle2. Not ideal for reheating3. Expensive4. Keeps condensation within the packaging

Plastic Coated Paper

The packaging is created out of paper coated in PFC chemicals that prevent grease and heat from leaving. It is usually used in sandwich, burger and fried food packaging. The grease-resistant properties ensure that no oils get released onto the consumers' hands when eating. The packaging contains heat for a short period of time when used and covered correctly. The package is able to be reheated however the grease-resistant chemicals can leach into the food and make it harmful to consume. Due to it being coated with polyfluoroalkyl substances and covered with food waste the product is unable to be recycled and has to be disposed of with the general waste. If the materials were to end up in spaces with wildlife, they would be contaminants and very harmful to the ecosystem. The big brands that commonly use this packaging are *McDonald's*, *Burger King*, *Subway* and *Popeyes*. The common items that are packaged in this packaging are hot sandwiches and fried foods. *McDonald's* and *Burger King's* values are to provide quality food at a reasonable price (*McDonald's*, n.d.). *Subway's* brand values are to eat healthier and reduce their environmental impact by focusing on sustainable sourcing ("*Subways mission statement 2020 | Subways mission & vision analysis,*" 2020).

Table 9: Advantages and Disadvantages of Plastic Coated Paper

ADVANTAGES	DISADVANTAGES
<ol style="list-style-type: none"> 1. Lightweight 2. Cheap 3. Printable 4. Grease resistant 	<ol style="list-style-type: none"> 1. Not recyclable 2. Not ideal for reheating 3. Chemical transfer into food 4. Keeps condensation within the packaging 5. Takes long to break down

Paperboard

The packaging is created out of many materials, mainly wood pulp, straw and or waste paper, there are many compositions of the material. The material is coated in grease and heat resistant chemical PFCs. The flat paperboard is then folded into its desired shape, we see this being used in many different shapes and sizes for many different food types. The boxes are often used in a lot of noodles, pasta and fried food dishes. The package is able to be reheated however, the grease-resistant chemicals can leach into the food and make it harmful to consume. Due to it being coated with polyfluoroalkyl substances and covered with food waste, the product cannot be recycled and has to be disposed of with the general waste.

Table 10: Advantages and Disadvantages of Paperboard

ADVANTAGES	DISADVANTAGES
<ol style="list-style-type: none"> 1. Printable 2. Grease resistant 3. Heat resistant 4. Many shapes and sizes 	<ol style="list-style-type: none"> 1. Not recyclable 2. Not ideal for reheating 3. Chemical transfer into food 4. Keeps condensation within the packaging 5. Takes long to break down

Compostable Fiber

The packaging material is made up of a mix of all-natural fibres. It is then moulded into the shape that is required. The packaging is designed to be composted with regular compost waste as well as to be composted by consumers in their own gardens. The packaging however is usually coated with grease-resistant chemicals that are harmful to the soil, they are very toxic and take years to break down and therefore should not be used to grow organic produce. Therefore, the containers are unable to be composted with the rest of the green waste and should not be thrown into the compost bins. The benefits that companies have of using compostable packaging is using greenwashing tactics to promote their brands as sustainable. *Freshii* uses this packaging to promote themselves as a health-conscious, sustainability-minded company; however, their packaging ends up in landfills just like the rest of the brands.

Table 10: Advantages and Disadvantages of Compostable Fibers

ADVANTAGES	DISADVANTAGES
<ol style="list-style-type: none">1. Made of natural fibres2. Natural look	<ol style="list-style-type: none">1. Toxic2. Not compostable3. No printing

Each of the materials has its own advantage and disadvantage but a common theme throughout is the disposability, all of them are mainly sent to general waste and landfills even though they are designed and marketed to be recycled or composted. The material that is the most sustainable in terms of its disposability is the EPS container. Although the container is made up of synthetic materials, it can be recycled and doesn't have any added chemicals. It can also be reused a few times when washed before it has to be thrown out.

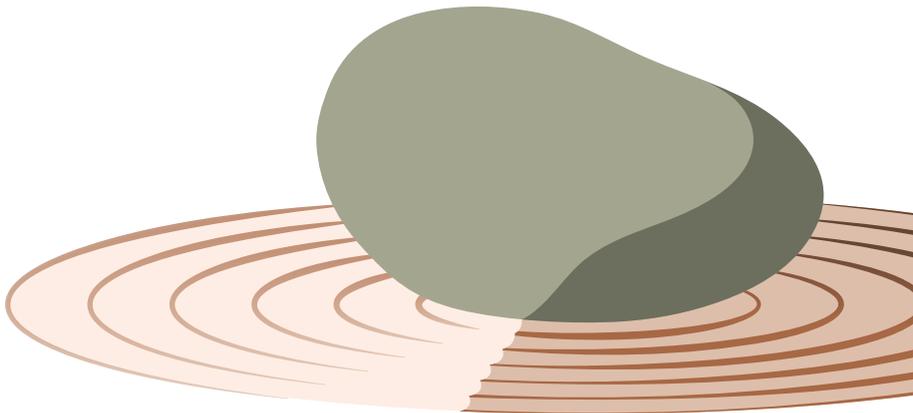


Figure 11. Visual Graph of Disposability Discussion Results

CONCLUSION

Production and disposability are important factors that influence the impacts that fast-food takeout packaging has on the environment. The general knowledge behind the packaging provides a good backing of information to understand the packaging characteristics. It helps understand the materials and their capabilities and as a result use that information to be knowledgeable about the type of packaging that is needed when consumers are partaking in a fast-food take out option. Fast-food brands use the same information and find what fits with their brand values and missions to promote and market their food products. They use visual cues such as natural elements and eco-friendly jargon to make consumers believe in their mission. Each of the materials has its own impact on the environment. The more common issue that is being faced is not having proper facilities to dispose of all the contaminated food waste packaging material. Companies produce items that have characteristics that can harm our environment but do not provide ways to dispose of them sustainably.

This research aimed to evaluate similar factors in different materials and understand how to use the designed product packaging effectively, learn the characteristics that make them unique and important, and look through the factors of disposability. There are quite a few limitations to this process, there are factors that were unable to be evaluated that impact the sustainability of the material. The factors are the source of materials, the transportation process, the mixing of materials, where the materials end up, how long they take to decompose. This lack of information makes it harder to judge the materials and the products in more depth. To better understand the implications of these results, future studies could address the disposal of the products the way they are designed to learn how much energy goes into the process and look into the monetary aspect in being sustainable with the materials.



REFERENCES

- Alexander, J. (2020, November 18). Does styrofoam keep things warm? Temperature Master. <https://temperaturemaster.com/does-styrofoam-keep-things-warm/>
- Andrews, D., & Walker, B. (2017, February 1). Many fast-food wrappers still coated in PFCs, Kin to carcinogenic Teflon chemical. EWG. <https://www.ewg.org/research/many-fast-food-wrappers-still-coated-plcs-kin-carcinogenic-teflon-chemical>
- Britannica. (n.d.). Paperboard. Encyclopedia Britannica. <https://www.britannica.com/technology/paperboard>
- Burger King. (n.d.). Values. Burger King: Online Offers and Ordering. <https://www.bk.com/>
- Business Insights. (2018, December 31). Takeaway containers -- the environmental cost of packing our favorite fast-foods. Business Insights.
- Chemical Safety. (2020, May 8). What is polystyrene? | Uses, benefits, and safety facts. ChemicalSafetyFacts.org. <https://www.chemicalsafetyfacts.org/polystyrene/>
- Chrobak, U. (2019, May 30). Eco-friendly packaging could be poisoning our compost. Popular Science. <https://www.popsci.com/postable-packaging-PFAS/>
- Chung, E. (2018, December 4). Canadian startups take styrofoam recycling to the next level | CBC news. CBC. <https://www.cbc.ca/news/technology/styrofoam-chemical-recycling-polystyrene-1.5067879>
- Dilkes-Hoffman, L. S., Lane, J. L., Grant, T., Pratt, S., Lant, P. A., & Laycock, B. (2018). Environmental impact of biodegradable food packaging when considering food
- Earth Resource. (n.d.). Earth resource Foundation. Wayback Machine. <https://web.archive.org/web/20130325091953/www.earthresource.org/campaigns/capp/capp-styrofoam.html>
- Environmental impact of biodegradable food packaging when considering food waste. Journal of Cleaner Production, 180, 325-334. https://journals-scholarsportal.info.ezproxy.lib.ryerson.ca/pdf/09596526/v180icomplete/325_eiobfpwcfw.xml

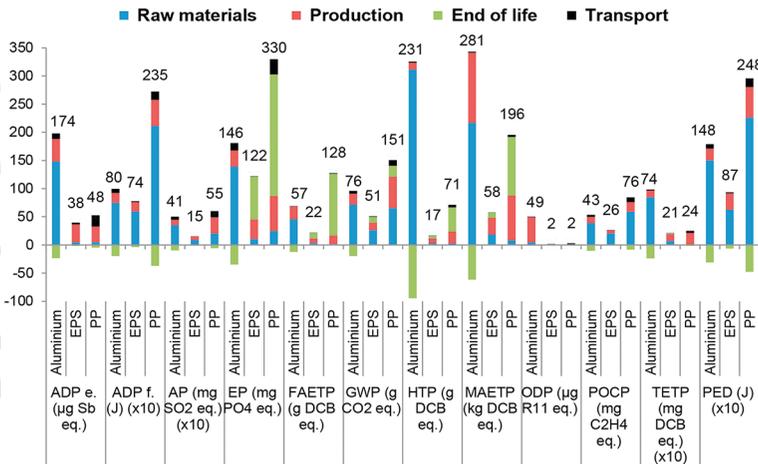
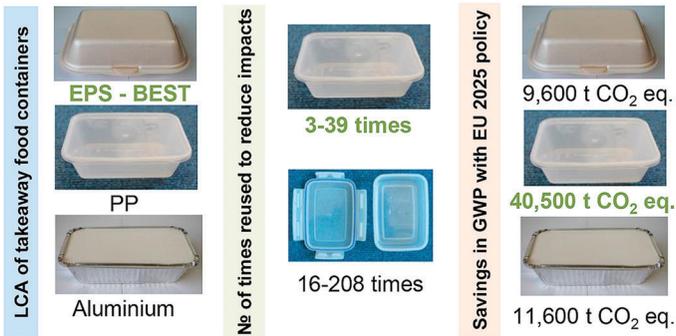
- Farmer, N. (2013). Trends in packaging of food, beverages and other fast-moving consumer goods (FMCG): Markets, materials and technologies. Elsevier.
- Gallego-Schmid, A., Mendoza, J. M., & Azapagic, A. (2019). Environmental impacts of takeaway food containers. *Journal of Cleaner Production*, 211, 417-427. <https://doi.org/10.1016/j.jclepro.2018.11.220>
- Genpak. (2020, June 1). What harvest fiber Compostable Takeout containers made from? Learn about bagasse! Genpak Blog - The Latest On Foodservice Packaging & More. <https://blog.genpak.com/2020/06/01/bagasse-biodegradable-containers/>
- Hall, C. (2020, August 7). Fast-food chains are using toxic food wrappers. *Eat This Not That*. <https://www.eatthis.com/pfas-burger-wrappers/>
- Ink Tank. (2019, October 31). Why you should consider alternatives for printing on polystyrene foam products. <https://www.kaocollins.com/inktank/consider-alternatives-printing-polystyrene-foam-products/>
- Jowat Klebstoffe. (2019). Adhesive Solutions for the Food and Consumer Goods Industry [PowerPoint PDF]. Jowat Klebstoffe. https://www.jowat.com/fileadmin/dokumente/anwendungen/PDFs/BI_Konsumgueter_EN-s.pdf
- Kadam, S. R., Evans, M. A., & Rothenberg, S. (2005). A Comparative Study of the Environmental Aspects of Lithographic and Digital Printing Processes, (1). https://schoJarworks.rit.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&https_redir=1&article=1027&context=books
- Lewis, J. (2019, May 6). Why styrofoam (Expanded polystyrene) should be banned everywhere in the world. *Medium*. <https://medium.com/age-of-awareness/why-styrofoam-expanded-polystyrene-should-be-banned-everywhere-in-the-world-4101552f5e2b>
- Marine Safe. (2015). Single-use plastic. *MarineSafe*. <https://www.marinesafe.org/the-problem/single-use-plastic/>
- Marsh, K., & Bugusu, B. (2007). Food Packaging? RoIes, materials, and environmental issues. *Journal of Food Science*, 72(3), R39-R55. <https://onlinelibrary-wiley-com.ezproxy.lib.ryerson.ca/doi/full/10.1111/j.1750-3841.2007.00301.x>

- Martinelli, K. (2018, November 12). Is the 30-Year-Long styrofoam war nearing its end? JSTOR Daily. <https://daily.jstor.org/is-the-30-year-long-styrofoam-war-nearing-its-end/>
- Martinez, J. (n.d.). Mediterranean and Asian diets. Our Everyday Life. <https://oureverydaylife.com/293002-mediterranean-and-asian-diets.html>
- McDonalds. (n.d.). Our mission and values. <https://corporate.mcdonalds.com/corpmcd/our-company/who-we-are/our-values.html>
- Molina-Besch, K., Wikstrom, F., & Williams, H. (2018). The environmental impact of packaging in food supply chains. Does life cycle assessment of food provide the full picture? *The international Journal of Life Cycle Assessment*, 24(1), 37-50. <https://doi.org/10.1007/s11367-018-1500-6>
- Razza, F., Fieschi, M., Innocenti, F. D., & Bastioli, C. (2009). Compostable cutlery and waste management: An LCA approach. *Waste Management*, 29(4), 1424- 1433. journals-scholarsportal.info.ezproxy.lib.ryerson.ca/pdf/0956053x/v29i0004/1424ccawmaIa.xml
- Subways mission statement 2020 | Subways mission & vision analysis. (2020, June 11). Mission Statement Academy. <https://mission-statement.com/subway/>
- Thackston, E. K. (2013). THE EFFECT OF PACKAGING MATERIAL PROPERTIES ON CONSUMER FOOD QUALITY PERCEPTION IN QUICKSERVICE RESTAURANTS [Master's thesis]. https://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=2673&context=all_theses
- Thompson, D. (2017, February 1). Toxins in Your Fast-Food Packaging? Boxes, wrappers found to contain harmful fluorinated chemicals, study contends. *Consumer Health News*.
- Vendries, J., Sauer, B., Hawkins, T. R., Allaway, D., Canepa, P., Rivin, J., & Mistry, M. (2020). The significance of environmental attributes as indicators of the life cycle environmental impacts of packaging and food service ware. *Environmental Science & Technology*, 54(9). <https://doi.org/10.1021/acs.est.9b07910>
- Veolia. (2017). Why is recycling important? Veolia Nottinghamshire. <https://www.veolia.co.uk/nottinghamshire/recycling/recycle-nottinghamshire/why-recycling-important>

Widaningrum, D. L. (2014). The importance of take-out food packaging attributes: Conjoint analysis and quality function deployment approach. EPJ Web of Conferences, 68, 00036. <https://doi.org/10.1051/epjconf/20146800036>

Wozniacka, G. (2020, January 15). The dark side of Compostable take-out containers. Eater. <https://www.eater.com/2020/1/15/21065446/compostable-take-out-containers>

APPENDIX



Figures 1 - 2. Environmental impacts of takeaway food containers - Research.

RESIN	CODE	AMOUNT GENERATED (THOUSAND TONS)	AMOUNT RECYCLED (THOUSAND TONS)
POLYETHYLENE TEREPHTHALATE	1	2860	540
HIGH-DENSITY POLYETHYLENE	2	5890	520
POLYVINYL CHLORIDE	3	1640	N/A
LOW-DENSITY POLYETHYLENE	4	6450	190 ^a
POLYPROPYLENE	5	4000	10
POLYSTYRENE	6	2590	N/A
OTHER RESINS	7	5480	390

Source: American Plastics Council (2006b) and EPA (2006a)

^a Includes linear low-density polyethylene

Figures 3. *Environmental impacts of takeaway food containers - Research.*

03

A Powerful Tool: How Graphic Design Plays into Chinese Propaganda

Anushka Bhardwaj



ABSTRACT

This thesis paper is intended to share insight and knowledge about the visual elements and historical eras that make up Chinese propaganda. This is important to uncover, as their strategically designed propaganda greatly affected their targeted audience.

The study takes on a Western sentiment, looking at two specific era's; The Mao Cult era and the Chinese Revolution. Both of these eras had bold political messages and propaganda design was at its peak.

The selected visual elements to be analyzed have been categorized into four; style, graphics, colour, and text. These have been used as guidelines for reviewing propaganda pieces from those two era's. The style is seen as their most important, as it had a domino effect on the other elements. The study shows what was the most popular style used, which was the Soviet realism style in the Mao Cult era, and a Cartoon style from the Revolution era. The graphics mainly showed false imagery of the ideal outcome. The focal point image was important so the message could be understood for the illiterate people. For colour, red was consistent as it has a significant positive message in China. Text was placed boldly and they were quotes from worshipped political leaders that could be inspiring.

It is clear that the designers carefully considered the desired outcome of the eras's political messages, and catered it to the elements to make it work. The propaganda from the two era's are quite similar but different in a few ways, nevertheless, each being impactful in their own right. However, the pieces do not hold the test of time, as they are outdated. Based on these results, it is seen why those propaganda pieces were so infamously indoctrinating citizens of China.

INTRODUCTION

As famous French military leader Napoleon Bonaparte quoted, *"China is a sleeping giant. Let her sleep, for when she wakes, she will move the world."* (Ishino, 2009). Today, China has ascended as one of the most significant powers economically and politically, as many countries followed suit based on China's decisions alone to improve their status significantly.

The country imposed political and philosophical ideologies onto the citizens who blindly followed suit and believed that no matter what China decides, the outcome brought prosperity, success, and other gifts, although it may not be accurate. However, this tied into one of the reasons China was considered powerful; it was one of the few most significant countries with a stronghold on Propaganda. Their Propaganda effectively pushed a desired message to the target audience, yet still beautiful enough to be kept as decoration (Chinese Posters, n.d.). In addition, their Propaganda was exceptionally aesthetically pleasing around the world.

This thesis study delved into answering the following question in detail: "Since China has the most extensive propaganda system globally, how does graphic design play into that? Especially when considering the history and the usage of graphical elements."

The paper also had a nuanced perspective of someone who was not natively or ethnically Chinese. Therefore, this paper automatically took a western approach to the topic, contrary to Old China's notions, teaching others unfamiliar with the eastern country. In addition, the study incorporated personal thoughts since Propaganda had a variety of reactions from the audiences. However, the paper remained unbiased about political ideologies such as communism as the focus of the research was to analyze the design aspect.

The literature review highlighted research from scholarly articles about four graphical elements used in the Propaganda to explain the pretense behind the historical usage. In addition, the review explained the purpose of Propaganda and the psychological effects on the audience. The review also examined the Mao Cult from the 1940s and the Chinese revolution of the 1990s. The gap between

the two eras exemplified the progression of Chinese design in comparing the differences and similarities of graphical elements.

This study analyzed four different propaganda pieces from each era presented in a chart with four categories: style, graphics, colour, and text. The categories were examples of universal elements used in graphic design in all countries. In addition, the research methodology unveiled the individuals responsible for the creation, considering that their background explained the choice in technique and the impact of the Propaganda. Finally, the results and discussion presented personal opinions to decipher the choices behind the Propaganda and concluded the validity of the information presented.

LITERATURE REVIEW

The structure of literature review is thematic. It is basically a how-to construct the perfect piece Chinese propaganda with the four design elements. Four elements that will be looked at are style, graphics/imagery, colour, and text. The utilization of each element has to work harmoniously with the others, in order to evoke a feeling that resonates and impacts the targeted audience. The application of these elements can depend on many factors which are - but not limited to; the era, the issue, targeted audience, and politics.

However, prior to getting into the actual creation of the pieces, the importance of pre-work needs to be emphasised. Pre-work will be about learning about what propaganda is and the significance of the two era's selected for their unique propaganda. The Mao Cult era wanted to push a communist regime, and one of the main points from the Chinese Revolution was to reject anything western and push nationalism. There are also laws and the target audience - being the citizens of China - to consider. This is important to understand as the graphical elements would be rendered useless or even used unwisely if not understanding the cultural context behind it, and when understood it could only be used creatively. Scholarly articles and textbooks related to graphic design, chinese propaganda, and Chinese history have thoroughly been researched to achieve the desired outcome of this structure.

Understanding the Definition of Propaganda and the Target Audience

It is important to be knowledgeable about propaganda as a whole - prior to actually designing it. The definition of propaganda needs to be understood and how it psychologically affects the targeted audience. (Heller and Poyner, 2014). In Steven Heller and Rick Poyner's textbook "*The Fundamentals of Graphic Design*," they cover all the basics in graphic design and the rules that apply to propaganda. The textbook is especially useful as there is a whole section dedicated to propaganda; giving various examples of propaganda pieces from countries, and explaining the graphical choices behind it and why it is effective.

The authors explain that propaganda is a powerful persuasive tool to push an agenda, rumour, argument, half-truth or a complete lie to the targeted audience. It is widely used within politics. However, In order to push the agenda, certain visual decisions have to be made by knowing the targeted audience and catering the graphical elements to them. For example, political leader Mao Zedong from the Mao cult era wanted China to purley be a communist country, please refer to Appendix A for a picture of him. He needed to portray his agenda effectively through propaganda, and did so by showcasing why communism is right and the amazing outcomes of it. Chinese citizens during this time were already desperately finding a way for a happier life, so visually communicating a message to them about the amazing outcomes (Heller et al, 2014). In another article by Cassidy George, called "a Visual History of Chinese Propaganda from the 1920's to today," make notes that propaganda posters were made from designers of varying backgrounds, such as teachers, students, traditional chinese painters, folk artists - thus showing that propaganda affected everyone (George, 2020).

A similar situation is Russia, which is also pro-communism and the case of World War II. Both these countries and time periods were stuck with a nihilistic situation, where there was little hope and lack of self, as it was a time of desperation as there was war, famine, massacres, and more. Propaganda prayed on the weak and

was perfect for speaking to vulnerable people. It goes to show how important it is to know your audience and what to actually include in the propaganda to reel them (Heller, et al, 2014).

Prework: Looking into China's History and Cultural Way of Life

Now that the definition of propaganda and importance of knowing the target audience is established and understood, it is important to look into specifics of the country that the propaganda is being made for, and understand the true impact of it. Since this paper is specifically about China, the country's history, political ideologies, and graphic design style is important to consider. The type of research could be classified as preliminary work in the work process.

China was or can still be classified as anti-westernization and pro-communism. These two ideologies were established during two significant time periods: the Mao Cult Era (1949 - 1976) and the Anti-western sentiment (specifically looking at the uprising in 1990 - and on going) (Xiu Zhong Xu, 2019). It needs to be seen as why these eras were significant for the citizens of China and how graphic design played into that.

In a research paper written and conducted by Catherine Jo Ishino, she tries to answer the question: "does modernization [in China] equals westernization?" She noted that China didn't show any western professional design until the 2008 Beijing Olympic games (Jo Ishino, 2009). She actually explains it through her western perspective and gives insight on China's graphic design from 1998 to 2008. The answer of if modernization equals westernization is quite subjective, however, Ishino points out how narcissistic it would be to correlate the two, alluding to the thought that China could be modern on its own and it has to adapt to western ideas and designs to progress in the world. It is not like new China - after communist party was abolished- only make cheap imitations of western country's designs.

China is a place where propaganda appears everywhere due to its heavy political message. In another article written by Javier

Hernandez titled “Propaganda Posters Dot the Chinese Capital,” he documents his time living in downtown Beijing - working as a journalist for the New York Times. He described how whenever he stepped outside his house he would see approximately 70 pieces of propaganda from his commute to the New York Times Bureau. All the pieces glorified President Xi Jinping. The pieces had quotes of Jinping’s would include “Chasing a dream” that ties with the president’s promises of making China the number one power in the world. It gives off the impression that China can be considered expert at creating propaganda as they have been doing it for years, and so casually. They already have the knowledge about what works and evolved over time to cater each message and audience.

In another study done by Ashley Esarey in her article called “Support for Propaganda: Chinese perceptions of public service advertising,” she actually explains that as the world creeps more into the modern ages, physical visuals forms of propaganda started to die out and televised or announced propaganda became more of an efficient way to share a message and it reached out to China’s urban population more (Esarey, 2016).

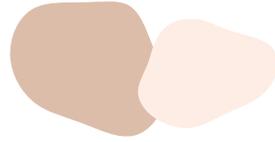
Prework: Laws and Consequences

It has already been established that propaganda isn’t just art, it is a visual form of communication. Heller and Poyner’s textbook explains the general legality of graphic design, any art piece made for the public eye has limitations, rules, and consequences to consider if handled poorly. In the case of Chinese propaganda, it is a huge ordeal as any wrong doing could lead to serious consequences such as incarceration and torture (Heller, et al. 2014).

For example, laws during Mao’s regime confined propaganda to his agenda. As a result, designers and publishing companies faced jail time and torture if they published propaganda against Mao’s agenda (George, 2020). However, the death of Mao in 1976 led to the usurpation of power by Deng Xiaoping who welcomed Western ideas. There was more openness to Western ideas, allowing a general sense of creativity and free speech to peek through and take in more styles (George, 2020). All of this is important to keep

in mind, as laws are constantly changing and without thorough research, there would be heavy life or death consequences.

Graphical Element #1: Choosing the Right Style

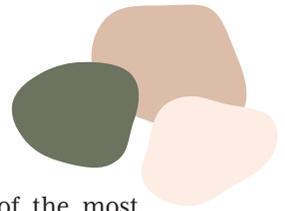


Style is an important factor that connects to other design elements such as being, image, colours, text. These are universal elements that everyone uses when designing - but in their own unique way, which China does. Throughout years starting from the 20's in China - styles have changed then, depending on the social issue, as explained and exemplified further in Cassidy George's article "A Visual History of Chinese Propaganda, from the 1920's to today." Her article breaks down the factors and styles that make Chinese propaganda so impactful and relevant, as the title suggests she starts from the 20's and makes her way up to this modern day - explaining how styles and imagery have changed throughout, taking influences from other communist countries and how impactful China's country is in a whole, which ties everything in together.

The style in all Chinese propaganda pieces, whether it be brochures, posters, and more - should be consistent depending on the time period. China in the 30's and 70's, had a more colourful approach - which mimicked the Soviet-realism style, used in other Soviet Union country's propaganda. Soviet-realism consists of bold red texts of a message or quote, framed with a white border, and illustrations of communist leaders in a semi-realistic style, refer to Appendix B for an example of Russia's Soviet-realism posters (George, 2020).

After the law that hindered creative freedom was abolished, posters became more experimental in style, going into Scandinavian design, surrealism, cartoon-ish, and even Western styles which was ironic due to China's anti-west stance. Styles will pertain to certain era's, different cultures or areas within China - and even outside of the country. For example, China could also send propaganda to any country such as Korea, and they may have to follow Korea's style to subliminally get their message across. Any change in style creates a domino effect of changes in other areas, such as colour, image, text, and more. (George, 2020).

Graphical Element #2: Graphics/ Imagery and Visual Hierarchy



Looking more into images or illustrations are one of the most important elements to consider when creating propaganda, up from the 1920 - till now - all the images and drawings capture the essence of the time period, only highlighting what was the relevant issue and what prosperity it could bring as an aftermath. Designers will often ask themselves various questions before or during designing, try to get in the head of the target audience, in order to showcase something enchanting and resonating that could manifest into the desired impact (Heller et al, 2014).

To analyze this further, Cassidy George's article analyzing Chinese propaganda designs will be referred back to, along with the incorporation of a similar article written by Amy Jane Barnes titled "*Chinese Propaganda posters at the British Library.*" In Barnes's article, she goes into more depth about imagery in the propaganda. For Mao cult era imagery, Mao Zedeng - who led the communist revolution was often put in the propaganda. He was displayed and sometimes exaggerated as this noble, brave, and God-like figure, which people can look up to and worship. China's pro-communist posters also had semi-realistic illustrations of handsome and brawny men holding red books or doing physical labour- which was associated with bravery and dominance, which could be considered inspiring (George, 2020). Propaganda would also include images of landscapes, mythological creatures called Daoist immortals, cartoon strips, or hand-painted flowers around images of workers, peasants, and soldiers (Barnes, 2020).

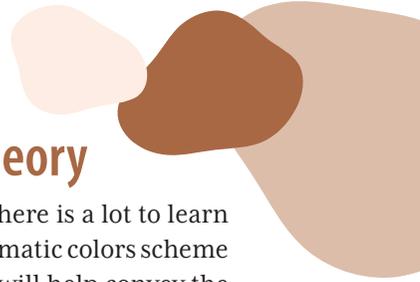
Some people liked to hang up their propaganda pieces, whether it be posters or brochures as home or room decor - so it was made that all the items be aesthetically pleasing, and by doing so, citizens would put it in homes, schools, factories, state buildings. It was so popular that more prints had to be made, luckily this was easy as it was cheap to produce (Barnes, 2020).

Visual hierarchy in imagery is important to consider as well, like what the main focal point is in the image, this is a question designers often ask themselves; what should stand out? The important piece of graphic would often be bigger than the rest of the graphics, placed in the centre, will be brighter or darker in colour than the rest. It is about where eyes should naturally be drawn to (Barnes, 2020). For example, for the Mao Cult era - evidently Mao should be the focal point of the propaganda piece, refer to Appendix C to see an example of this.

Graphical Element #3: The Importance of Colour Theory

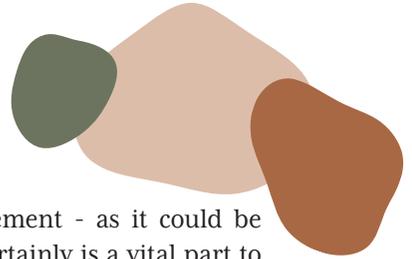
A key part of graphic design is colour theory, there is a lot to learn such as: complimentary, analogous, monochromatic colors scheme and choosing the right colour for the graphic, will help convey the overall message clearly and amplify its effect. Each colour sets a mood, as Chinese propaganda was often hung in office buildings, it inspired those who worked in corporate jobs as that type of job could be labelled as mundane and drab, the bright colours of the poster with a powerful message kept people motivated and brightened up their day.

In order to use colour for propaganda correctly to reach a certain audience, it is important to do research as certain colours are associated with different emotions and different cultures. Specifically looking at China, an example about the correlation between colour and country is given from referring back to Heller and Poynor's book about understanding the fundamentals of graphic design. The book explains that in China, red symbolizes good fortune and joy - so red is a colour that is very much used in their posters and banners to portray a positive message (Heller et al, 2014). Red is also good for persuading people into ideologies that may not be morally good, but give the illusion that it is. This persuades the citizens of China into thinking that since it is red, the message they follow will eventually bring them good fortune.



However, using the wrong colour in a certain country, to convey a meaning will not give the desired effect but more so the opposite. As some colours may have a different meaning from one country to another, for example white represents purity, although in China it correlates with death. With a simple mistake of not thoroughly researching, it is more than just a casual lesson of colour theory it goes back to the law and it being a life or death situation if handled poorly.

Graphical Element #4: The Power of Words/Text



Text may indirectly not be a graphical element - as it could be classified more so as writing. However it certainly is a vital part to include in the poster that could bring it to the next level. Simply by applying a powerful statement or quote from a leader or dictator, definitely helps make an impact on the target audiences who could potentially resonate with the text or be curious enough to learn more. Referring back to Barners article, called “Chinese propaganda Posters at the British Library,” she explains how during Mao Zedeng’s regime, Mao was the voice of reason, and any of his words could be used for a slogan. His most popular slogan is “Serve the People” or “Service of Present,” so those quoted were printed on a lot of propaganda pieces(Barners, 2020). However, She explains how posters with a lot of text did not click with the illiterate and rural parts of China, therefore it hindered the message getting across. The text had to be simple enough to understand or graphics had to be pushed in order for the illiterate to visually understand the message.

Conclusion

Realizing the impact the propaganda is going to make before and after it is created, is key. The piece needs to show the effect of how it affected the audience or what could have been done. For the Mao Cult era from the 40’s - they followed suit with the Soviet-realism style, and used mainly graphics of Mao as God. This portrayed this era of China as suffering from a lack-of self and nihilism. During

the Chinese revolution, the citizens of no matter what age, gender, or occupation, wanted China to have the upperhand - hence there being a high sense of nationalism. However, they needed to follow the ways of other countries before they got to know who they were as a country, for example copying styles, or movements, for example China following communism from other Soviet countries.

There were strict rules placed that hindered creative freedom and if any propaganda was published against the message that was being pushed, it could lead to severe life-threatening consequences. Fortunately, after the abolition of Mao Cult led to strict design rules being changed and there was more creative freedom interarms of style that would be experimented with over the years, hence the variety of styles in the Chinese revolution posters starting in the 90's. Even though there was more experimentation with styles, there were some consistency that undoubtedly worked, such as the continuous use of the colour red colour, symbolizing a lot of optimistic feelings. In combination with that, impactful graphics and illustrations depicting the aftermath of the message being pushed, was always in a positive light. Quotes from well-liked leaders or statements relevant to the times were often bolded, however due to illiteracy rates - graphics were definitely favoured as the element that would stand out and help those understand the message.

Overall the scholarly sources helped in terms of finding technical information about China's specific choice of style, colour, graphics and text, as well as historical and political information about China during the two eras. The way China used these graphical elements helped make an emotional connection between the audience and the piece. They did so by sticking to a specific style, staying consistent with the colour red, and only showing positive imagery about the message being pushed, and inspiring from political leaders' text.

METHODOLOGY

The paper qualitatively collected data to confirm the research from the literature review through four elements: style, colour, text, and visuals. The study compiled the elements as a chart and included points and observations about each element to confirm design inconsistencies. For example, the study revealed the frequency of a style or colour used throughout propaganda pieces to prove the effectiveness of the design.

The posters analyzed from the Mao Cult and the Chinese Revolution looked at the posters about anti-westernization. The two eras were selected because the propaganda is widely-known and there was a lot of information about it. The posters are memorable due to the way the graphical elements were used, which makes it stand out more. This is in opposition to looking at modern Chinese propaganda, which is the time where propaganda does not even look like traditional propaganda. The message that needs to be shared is portrayed more subtly, and the propaganda piece just looks like any other day item. It is certainly interesting to look at, but a lot harder to obtain information; which was not ideal for this paper.

The study sourced the propaganda posters from the Shanghai Propaganda Art Centre and served as the primary sources of information. However, the study also investigated secondary sources about notable artists behind the propaganda piece. In addition, the artist's education and design styles were necessary to consider as they explained why they chose this specific message. Finally, the study analyzed additional information, such as background knowledge and other critical points. This additional information about the artist and impact was found in the scholarly text from the Ryerson database and other various websites online.

The ultimate goal is to see why those posters were so relevantly impactful, by analyzing it into different elements in a chart, and learning about the artist and history behind it. Since the literature review already uncovered information about how China applied these graphical elements, it will be seen when analyzing those posters if there is any consistency and even compare the

propaganda from the two eras to show any progression or major changes that look like what needed to be made.

The study also considered ethics in propaganda as it was a dangerous tool used to misconstrue messages. However, the study respected China's ideologies through the maintenance of impartiality. The analysis focused on the text, quotes, and message behind each poster based purely on objective information. Therefore, the study solely directed criticism to the design aspect.

Unfortunately, there was not enough time to contact Chinese graphic designers and journalists who covered the topic of Chinese propaganda. The study tried to contact a few artists but did not receive a response. As a result, an interview from a professional knowledgeable about the topic was not attainable. For this reason, the study focused on the assessment of articles from the Ryerson database and web browsers, such as Chinese posters.net and Shanghai Propaganda Art. Langfitt (n.d) and Shashkevich (n.d.) presented many examples of Chinese propaganda and linked the sources to other propaganda articles. For example, Langfitt (n.d.) linked sources of the images to Shanghaiposterartcenter.com, and each website further displayed propaganda pieces and other helpful information.

To compensate, more focus was put on finding more articles from the Ryerson database and web browsers. Various sources were visited such as chinese posters.net and Shanghai propaganda art, and an intriguing article written by Frank Langfitt called "*The Art of Chinese Propaganda*", and another article by Alex Shashkevich called "New Stanford exhibit showcases propaganda posters made during China's Cultural Revolution." The reason as to why these articles were especially useful was due to the fact that they showcased many examples of Chinese propaganda. Fortunately, they also linked the sources of those propaganda pieces; which lead to other articles of Propaganda. For example, looking at Langfitt's article, he linked sources of the images he used and found, and therefore led to finding Shanghaiposterartcenter.com. Each website linked to another displayed more pieces of propaganda and every useful information. Posters that were created by the same artist were used a lot as there was already a lot of information given about their design styles.

The study ensured that all propaganda pieces analyzed a different story or an idea beyond political leaders. However, pieces with the same political message remained unique through various images, styles, colours, and text.

RESULTS

Analysis of Chinese Revolution Posters

Exhibit A



Figure 1. *Anti-Western War Poster of Chinese and Korean Armies. (1951).*
Shanghaipropagandart.com

Context

Figure 1 was an anti-Western war poster created in 1951. The creator of the piece is unknown. This poster conveyed the Chinese and Korean army's strength and their efforts to defeat the West.

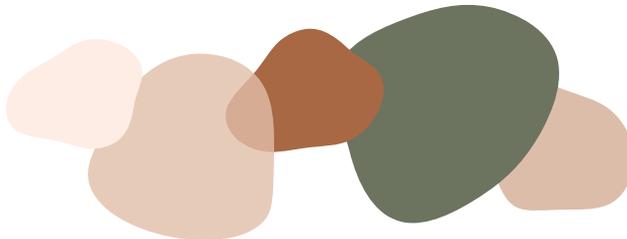


Table 1. Graphical Elements Analysis of Figure 1

VISUAL ELEMENT	EXPLANATION
Style	Similar to Soviet-realism style, however, it is its own style of realism.
Colours	Strong red colours, depicting joy and victory - appreciate colour as it shows the Eastern countries winning.
Graphics	A Chinese and Korean soldier are drawn as giants - representing the upper hand they have. The US soldiers are small and blue - almost like smurfs or aliens. Which goes with the notion that Western ideology or anything Western related is foreign and odd. The US soldier is holding the flag and running away in fear, all bloody and bruised. There's also blatant racism, because in the poster an African American man is drawn in a stereotypical caricature, who's also smushed underneath military vehicles - symbolizing how he's the weakest of the bunch.
Text	<i>"Long Live Victory of Korean People's Army."</i>

Impact

Inspiring to those to join the army, targeting the average Chinese and Korean man - no matter what occupation. This would hit hard for extreme nationalists and for those who were poor farmers, it has this misleading message that China could win and everything will come out fine and dandy, with zero repercussions. However, that is not the reality of it. China and Korean would plausibly come out superior, however the poster glorifies war and shadows all the repercussions of being a soldier, like all the trauma, physical injuries, and having sheer blindness to reality.

Exhibit B



Figure 2. Image source: Shanghaipropagandart.com

Context

This poster was created in 1970 as an advertisement for a Modern revolutionary ballet. It was a way of making profit for the ballet while spreading political messages simultaneously.

Table 2. Graphical Elements Analysis of Figure 2

VISUAL ELEMENT	EXPLANATION
Style	Mix of photography and realism.
Colours	Bright colours, including the staple red. There are blues and greens as well, nothing dark. Blue is a colour of wisdom and inspiration, while green symbolizes growth and harmony (Color Meaning, n.d.).
Graphics	Propaganda depicts ballet dancers elegantly in stance, holding a gun. The images give a serenity type of feeling despite the guns, which in contrast, guns give more of an intense type feeling. The dancers are in daytime with pretty trees.
Text	<i>"The Red Detachment of Women."</i>

Impact

This is a notion of encouraging the female audience to join the fight, and brainwash people into seeing war as an artistic art form.

Exhibit C



Figure 3. Image source: Huckmag.com

Context

This poster was created in 1961. The designer and the dimensions of the piece is unknown.

Table 3. Graphical Elements Analysis of Figure 3

VISUAL ELEMENT	EXPLANATION
Style	Cartoon style.
Colours	Warm tones, consisting of reds, yellows, and oranges. Makes for an inviting poster, and evokes joyful feelings.
Graphics	Depicts male and female farmers harvesting crops. They're carrying crops and blocks of steel in a brave manner, showing courage and dignity.
Text	<i>"Guarantee the Grain Harvest."</i>

Impact

This poster is targeted mainly at farmers. They portray the workers in the illustration with god-like power, carrying heavy crops, creating the illusion that the job is very easy to do.

Exhibit D



Figure 4. Image source: Shanghaipropagandart.com

Context

This poster was created in 1967, is 79.5 x 53.5 cm in dimensions and is a part of the IISH collection and is published in Wuhan. This poster is about the overthrow of Dadao Peng Dehuai, Lao Ruiqing, Chen Zaidao, and Liao Laotan. Peng, Marshal of the People's Liberation Army, fought against Mao Lao, chief of Staff of the PLA.

Table 4. Graphical Elements Analysis of Figure 4

VISUAL ELEMENT	EXPLANATION
Style	Line art, cartoon style, and simplistic.
Colours	Red is the single colour used and serves a highlighter for the most important graphic, the soldiers.
Graphics	Depicted soldiers, policemen, and figures of authority as perpetrators. The second soldier pointed the rifle at the men. One of the soldiers held a white book that consists of laws.
Text	<i>"Overthrow Peng Dehuai, Lao Ruiqing, Chen Zaidao, Liao Laotan!"</i>

Impact

The poster villainized the four men and justified their prosecution by the army. The poster depicted the army as the true leaders who could help the country.

Mao Cult Posters

Exhibit A



Figure 5. Mao Cult Posters. chinese posters.com

Context

Created in 1970 and published by Shanghai Renmin Chubanshe. The exact designer or number of designers is not known. The height is 53 x 77 cm, and is from the Landsberger collection. Stefan R. Landsberger (1955), was a trained sinologist at a university. He was fascinated with Chinese propaganda and started a collection, which ended up being the biggest propaganda collection in the world (Chinese Posters, n.d.).

Table 5. Graphical Elements Analysis of Figure 5

VISUAL ELEMENT	EXPLANATION
Style	Soviet-realism.
Colours	Red.
Graphics	People cheering on the Tiananmen Square in Beijing, cheering for Mao. The first few people are holding red books titled "The Quotations from Chairman Mao, the Mao Zhuxi Yulu", where Mao quotes Marxist ideologies which the public took as words of wisdom.
Text	<i>"Love live chairman Mao! Long, long live!"</i>

Impact

This poster is the most straight-forward and simplistic of the bunch. It just depicts Mao and Stalin as giant God-like figures, with the flags waving in front of them.

Exhibit B



Figure 6. *Mao Cult Posters*. chineseposters.com

Context

This was created in 1954, designed by Ding Hao, Zhao Yannian, and Cai Zhenhua. This poster was published by Huadong Renmin Meishu Chubanshe. It is 76x53.5 cm tall. Ding Hao taught at the Shanghai Art Training school, and he became the head of designing propaganda images for the publishing company called Shanghai people's Fine Arts Publishing House. Zhao Yannian also studied art, a notable thing about him is that he studied both western and Chinese art, which is quite interesting as it is established that China is anti-western, so he since he studied both ways, he was probably

cautious and education on the the impact of western art and Westernization in general. Zhao also taught art, being a professor of Central Academy of Fine arts, he was also a member of the council of the Chinese Artists Association. Lastly, Cai Zhenhua was always interested in American techniques in art and enrolled in Hangzhou Xihu College and worked as an independent designer after. After 1949, he did some work for the Chinese-Soviet friendship Hall in Shanghai. Those three designers often collaborated together, as it worked well together (Chinese Posters, n.d.).

Table 6. Graphical Elements Analysis of Figure 6

VISUAL ELEMENT	EXPLANATION
Style	Soviet-realism.
Colours	There are many colors, especially coming from the fruits. The text this time is not read, but in front of a red banner.
Graphics	Mao is surrounded by construction machines, industrial plants, and a row of vegetables and fruits. The things around Mao could represent what he could bring when he is elected and one follows him.
Text	<p><i>“Turn China into a prosperous, rich and powerful industrialized socialist country under the leadership of the Communist party and Chairman Mao!”</i></p> <p>It is important to note that not all Chinese scripture, or specifically “Shanghai Hua” a dialect spoken in Shanghai (Chinahighlights, n.d.). Words will not be translated verbatim, but this is the appropriate translation that makes sense in the English language. Some words could mean something else.</p>

Impact

As mentioned before, this poster simply represents what Mao promises to deliver, like more fresh produce would be available, innovative technology and more places to live. This visual graphic helps convince people, and possibly manifest it into reality if more people believe in him and follow.

Exhibit C

Context

This poster was created in 1951, depicting the celebration of the Chinese communist party. This is one of the 50 posters created to depict colourful scenes of celebration that denounces capitalism, including imagery of Mao. The technical information is unknown.



Figure 8. Stanford.edu

Table 8. Graphical Elements Analysis of Figure 8

VISUAL ELEMENT	EXPLANATION
Style	A hybrid between cartoon and semi-realism, but not classified as traditional Soviet realism. This is more of a unique style that China adhered to.
Colours	There are colours ranging from reds, blues, greens, and yellows. In China yellow corresponds with royalty, green also represents wealth in China.
Graphics	Depicts a large crowd cheering for pro-communist political leaders in a stadium with Mao being one of the key figures. The crowds are cheering loudly looking above and everyone is joyous.
Text	<i>“Celebrate the 30th Anniversary of the Birth of the Chinese Communist Party.”</i>

Impact

Showcases a sense of togetherness, how a whole country could come together and be successful into pushing a political theory.

Exhibit D

Context

This was created by Xin Liliang in 1954, it is from IISH collection and it is 78 x 53 cm tall. Liliang designed commercial adverts for Shanghai Shengsheng Fine Arts Company. He joined Shanghai People's Fine Arts Publishing House in 1959.



Figure 9. *Mao Cult Posters*. chineseposters.com

Table 9. Graphical Elements Analysis of Figure 9

VISUAL ELEMENT	EXPLANATION
Style	Soviet-realism.
Colours	Consistent use of greens, blues and yellows.
Graphics	Depicts a happy and healthy family, in a spacious home eating good food, enjoying each others company. The imagery evokes a sense of happiness. There is an uncanny image of Mao hanging on their wall, as if he is a part of the family.
Text	<i>"Chairman Mao gives us a happy life."</i>

Impact

This poster projects an image that could be manifested into reality if families follow suite with the political ideology of communism. Just like the way the families are smiling in the poster, families in real life could feel the same and be braced with prosperity.

DISCUSSION

Interpretation

The majority of the posters were designed by graphic designers who have studied fine arts in Shanghai, and are knowledgeable about Western art. This only makes sense, since propaganda is a professional piece of graphic and requires a lot of visual and technical skills.

Chinese revolution posters have a variety of styles, more so cartoon-ish as they exaggerate certain characters. For example, the designated enemies - whether it be western enemies such as the American Soldiers in Exhibit A, or political leaders from Exhibit D, enemy is always portrayed as small, vulnerable and alien-like. It almost sets a humorous tone, which is perfect for grabbing the attention of children. The winning team, usually the Chinese soldiers, are depicted as a giant, very strong with muscles, and always attacking the opponent. This gives an illusion for the audience, projecting their biased views onto the audience and getting them onto the winning team, whether they're actually winning or not.

Mao posters consistently used the Soviet-realism style, which only confirms that it was the staple style for all communist parties. It was easy to tell what is a communism poster and what is not. It mainly had graphics depicting the aftermath of Mao being followed or why he should be followed, for example the poster with the family was the most prominent. Personally, graphics from the Revolution era were much more interesting, eye-catching and experimental. Using the same style all the time is redundant and not as eye-catching anymore - which is definitely ineffective when wanting to grab attention.

The same thing could be said about colour. At this point it is known that red is the most prominent colour but again could be repetitious. In this modern day, red is a dead giveaway that the piece displayed is in fact propaganda, due to how the colour is used so much. Modern propaganda today is subtle in message, even if it is bright in colours, there is more variety to make the message or agenda less explicit.

Text, even though written boldly in Chinese characters - it is never too overbearing, it is commendable that the graphics are the focal point of any poster so it is more inclusive for those who cannot read or young children who do not understand the text yet. Of course, text is important too, however, considering some people in China - such as the farmers, visit Exhibit C in the Chinese revolution part - were illiterate, so the message would come across clearly through graphics, as anyone would universally understand a visual message.

Implications

Overall, the results correlate with the research that has been done. This information is crucial as this propaganda has swayed people into joining sides and even devoting their whole life to it. Mao was once worshipped like a God. He affected the lives of many families and generations to come, referring back to Exhibit E to the Mao Cult posters. Propaganda just shows very powerfully how a piece of paper with a graphic and some text can impact a whole society - let alone a country. Of course, a lot of thought goes into making propaganda, it is a manipulative intent that can be cunning and needed to make my people intelligent in that graphic and psychological field, going back to the artists who studied art in Shanghai.

Limitations

Unfortunately while looking for propaganda pieces, posters were mainly found in opposition to other mediums such as brochures, billboards, and more, except for the one ad for the Chinese Revolution posters. This is an issue because other mediums have the ability to display new kinds of information in different ways, but due to limited time and resources, this could not get looked into more. It would have been nice to see how graphic design styles are applied differently to different materials. For example, what type of paper did they use? What would happen to the posters if it rained and the ink bled? Was there a special ink they used? All these things are considered important in terms of design as well. These questions remain unanswered due to these limitations. Some of the data came out redundant - it certainly confirmed the research from the literature review, however it lacked new insights.

Recommendations

Further research on modern Chinese propaganda starting from the 21st century, is needed to showcase the progression in the country's graphic design, furthering the impact of the propaganda and what visual elements still hold the test of time. It is aware that the Mao Cult era and vintage Chinese Revolution propaganda are the face of all Chinese propaganda - however, there should be more information on the current time period. It needs to be seen how China currently showcases their propaganda and what were the actual lessons learned to improve the designs.

CONCLUSION

China is definitely in its own power, the country knows what works and what doesn't when persuading people with propaganda. Chinese propaganda is so impactful through their visuals which implement specific styles, colours, graphics, texts have been consistently used for years. That does not mean there is no progression, as China grew as a country, their design styles were a lot more open and experimented. They know what they wanted to show and say based on the illustrations and text showcased. It was clear the designers knew what to do based on their educational background and the significant events of China. All these factors helped make the right decision choices when capturing the target audience's attention.

It is almost horrific how much thought went into it to push a potential lie, and possibly put everyone's lives in danger. But the time and thought that goes into propaganda can't help but be commendable. The study of the design of propaganda - not just Chinese propaganda, but propaganda as a whole, should be pushed. This will allow the world to learn and reflect on any major life-changing events in the future.

REFERENCES

- Barnes, J. (2020). Chinese Propaganda Posters at the British Library. *Visual Resources*, vol. 36, no. 2, pp. 124–147., doi:10.1080/01973762.2020.1746498.
- CHINESEPOSTERS. (n.d.). Chinese Propaganda Posters.
<https://chinese posters.net/>
- Colour Wheel. (n.d.). Color Wheel Pro - See Color Theory in Action.
<http://www.color-wheel-pro.com/color-meaning.html>
- Esarey, A. Stockmann, A. & Zhang, J. (2017) Support for Propaganda: Chinese perceptions of public service advertising. *Journal of Contemporary China*, 26:103, 101-117.
DOI: 10.1080/10670564.2016.1206282
- George, C. (2020, April 02). A visual history of Chinese propaganda.
<https://www.huckmag.com/art-and-culture/art-2/coronavirus-communism-posters-history-chinese-propaganda/>
- Heller, Steven. 2014. *Design Literacy: Understanding Graphic Design*. New York, NY: Allworth Press. ProQuest Ebook Central.
<https://ebookcentral-proquest-com.ezproxy.lib.ryerson.ca/lib/ryerson/detail.action?docID=1657454>
- Hernandez, J. C. (2018, January 29). Propaganda Posters Dot the Chinese Capital. *New York Times*, p. A4(L). <https://bi-gale.com.ezproxy.lib.ryerson.ca/global/article/GALE%7CA525380950?u=rpu-main&sid=summon>
- Hinsbergh, G. (2019, May 10). Modern Chinese: Mandarin and Dialects.
<https://www.chinahighlights.com/travelguide/chinese-language/chinas-languages.htm>
- Ishino, Jo. Catherine. (2009). Does Modernizing Mean Westernizing? Western views of New China's Graphic Design 1998-2008. (Date: 2009-01-01T00:00:00Z) [Major Research paper, York University, Toronto, Ontario]. Ryerson Library.
<https://digital.library.ryerson.ca/islandora/object/RULA%3A3197>
- PPAC. (n.d.). Shanghai Propaganda Art.
http://www.shanghaipropagandaart.com/home.asp?class=beautiful_book

APPENDIX



Appendix A

Mao Zedong was the face of the Chinese communist revolution and the founder of the People's Republic of China. He appeared in a lot of propaganda, which showcased him surrounded by adoring crowds, and depicting him as a god-like figure. *Image courtesy: Alphahistory.com*



Appendix B

This is a Soviet-realism poster, a common style that pro-communist countries used in their propaganda. This picture showcases Joseph Stalin, with a quote in bold red text at the bottom, surrounded by adoring people. This is similar to how posters of Mao Zedong were depicted. *Image Courtesy: Flickrriver.com*



我們偉大勝利的旗幟毛澤東和斯大

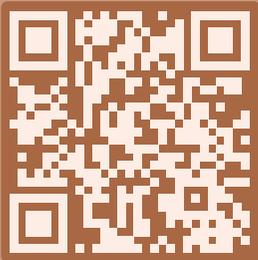
Appendix C

This image depicts Mao and Stalin standing tall, leading the future of communism. The image uses a lot of red, from the flags of China and communism to the text at the bottom. *Image Courtesy: npr.org*

04

The Brown Stripe In Pride: Exploring South Asian Queer Liberation Through Graphic Design

Afrah Idrees



ABSTRACT

Graphic design has held a significant role in creating feelings of pride and liberation for the LGBTQ+ community throughout history. This has been facilitated through the development of symbols such as the pride flag, the pink triangle, AIDS prevention campaigns, and more. However, throughout gay liberation movements, there has historically been a lack and exclusion of queer South Asian voices and experiences, especially within the Western world. This paper aims to explore the use of graphic design and visual communication by queer South Asians to uncover how these pieces facilitate liberation for themselves and their communities. In this study, a visual analysis was conducted on five key pieces of graphic design, which looked at the way in which colour, typography, hierarchy, emphasis, content, and medium worked together to communicate the messaging of queer South Asian individuals. An analysis of the results uncovered that South Asian individuals have used graphic design for queer liberation in various forms, including to foster safe meeting spaces in cities using national colours of South Asian countries to draw community members in, to promote queer South Asian art festivals through newspaper design, and to protest homophobic and transphobic laws in South Asian countries on social media. The overall conclusion revealed that each piece of design held an underlying political purpose of creating safety and inclusion for the often marginalized group, and was more than a display of graphic art for beauty and aesthetic purposes. It also revealed that there is much work to be done in ensuring the representation and inclusion of South Asian individuals in queer conversations and communities, as well as acknowledging their contributions to movements of liberation.

GLOSSARY

Diaspora: Diaspora is defined by Merriam Webster Dictionary as “the movement, migration, or scattering of a people away from an established or ancestral homeland” (“Diaspora,” n.d.). In this thesis, the diaspora refers to South Asian people that have immigrated to North America from their countries of origin or were born in North America but come from a deep rooted ancestral background elsewhere.

Liberation: The term liberation can hold multiple meanings, yet the one most significant to this thesis refers to the feeling of being liberated, as defined by Merriam Webster Dictionary as “freed from or opposed to traditional social and sexual attitudes or roles” (“Liberated,” n.d.). Facilitating this is Merriam Webster’s alternate definition of liberation as a movement that “seek[s] equal rights and status for a group” (“Liberation,” n.d.).

Queer: Queer is a term that is often used to refer to sexual identity, particularly those who identify as lesbian, gay, bisexual, transgender, gender non-conforming, and so forth (“Queer,” n.d.). Though the term queer has come to have multiple meanings, for the purposes of this thesis it is used as an umbrella term for the LGBTQ+ community.

South Asian: An ethnic group consisting of those that come from the countries of Bangladesh, Bhutan, Sri Lanka, India, the Maldives, Nepal, and Pakistan (“South Asia,” n.d.).

DESIGN TERMINOLOGY

Colour: The way in which the eye interprets light reflects the appearance of colour, which can then be referred to by its hue (colour such as red, orange, etc), lightness (brightness of the reflectance from light to dark), or saturation, known as the purity or vibrance of the hue (“The Visible Spectrum,” n.d.).

Emphasis: A principle of design which refers to the part of the visual that attracts the viewer’s attention (“Getty Education,” 2011). Typically designers create emphasis through the use of varying levels of contrast, size, or colour.

Hierarchy: Organizes elements by importance, often done through the use of varying layout and colour (Siang, n.d.)

Typography: Typography is defined by Britannica as “the design, or selection, of letter forms to be organized into words and sentences to be disposed in blocks of type as printing upon a page” (“Typography,” n.d.). For the purpose of this thesis, typography also refers to the use of letter forms for digital design usages.

INTRODUCTION

The graphic communications industry exists to disseminate knowledge and ideas across the world in ways that are powerful enough to influence people's ways of thinking and being. It has given a platform and a means of communication to many groups across the world, over the course of time. One group in particular that has made use of visual communication in their campaigning and fight for justice is the LGBTQ+ community, also referred to in this thesis as the queer community.

Gay liberation, or, the LGBTQ+ civil rights movement in the Western world, is a movement that began in the late 1960s at an LGBTQ+ bar in New York City, known as The Stonewall Inn (“Stonewall,” n.d.). On June 28, 1969, police raided the establishment after a recurring pattern of harassment against LGBTQ+ people, to which the community fought back and rioted against, ultimately leading to six days' worth of demonstrations and gatherings in protest (“Stonewall,” n.d.). The Stonewall riots are referred to as the catalyst for the gay liberation movement, as they spearheaded the concept of organizing together through a shared identity to fight for sexual freedom and liberation (“Stonewall,” n.d.).

After the riots, groups across the country and continent began to form to advocate for LGBTQ+ rights (“Stonewall,” n.d.). Among these groups developed pieces of visual communication and graphic art that were used to represent the community and their pride. It was during this time that prolific LGBTQ+ symbols such as the lambda

and rainbow flag were created (Campbell, 2019). The creation of these groups, however, still presented a division between people of colour and white members of the LGBTQ+ community. In books on the history of queer graphic design, there is minimal voice given to people of colour, and notably less to the South Asian queer community. This thesis aims to gather and analyze the work of queer South Asians during the time of liberation from the late 1990s to the 21st century. Through a visual analysis of these design pieces, the unique ways in which South Asians used graphic design for organizing and their own personal liberation will be uncovered and explored in detail.

LITERATURE REVIEW

Introduction

The aim of this literature review is to uncover the existing literature on visual communication, queer identity, and South Asian ethnicity. In order to understand queer liberation as it operates in South Asian communities, it is necessary to examine the position that it has, and currently occupies in society. As a South Asian woman who has observed queerness as a historically white dominated space, developed partly by the lack of acceptance of homosexuality in communities of colour but also by a Western suppression of racialized voices, one must consider how South Asian queer liberation came to be and created a voice for itself in this space, despite exclusion. This review ultimately analyzes the way in which this form of liberation, which includes open personal and political expressions of sexuality, exerts itself through mediums of visual communication, and reveals gaps in the literature among work created by South Asians for queer visibility.

Queerness as a White Dominated Space

In spaces occupied by minorities, there are often several intersections of race, gender, sex and other that compose the identities of these individuals and their lived experiences. These

aspects of their identities inform their lives in ways that those with white privilege are inherently unable to experience or understand from a racial standpoint. In a society rooted in colonialism, the power and privilege that whiteness holds pervades into all aspects of life, and in an already marginalized group, it prevails still in queer spaces. This is explained in Khadijah Kanji's paper, "The Gays Aren't All White, The Desis Aren't All Straight: Exploring Queer Subjectivity in the Toronto South Asian Diaspora" as being caused by the creation of the Other amongst queer community groups, in which racialized individuals are separated from those who are not (Kanji, 2017).

In these spaces, queerness and race cannot co-exist, as these people are deemed Other based on only one identity marker at a time; they are either queer, or they are racialized.

In Toronto, instances of Pride parades and community gatherings have repeatedly shown this division between queerness and race; interventions of Black Lives Matter Toronto in 2016 and Queers Against Israeli Apartheid Contingent have historically been neglected and met with exclusion, being deemed as "disruptions" by the queer, dominating white presence of the gatherings (Kanji, 2017).

From a South Asian perspective, one must consider the ways in which the culture possesses its own traditional ways of performing gender, which often includes the way in which women and men dress, and uphold their own gender identity markers. This is notable in Soma Patel's piece, "'Brown girls can't be gay': Racism experienced by queer South Asian women in the Toronto LGBTQ community." In this article, the ways in which South Asian performances of gender differ from white performances is highlighted through an individual named Parvati's experiences of discrimination as a Toronto resident for 24 years:

She contextualizes the 1990s as "an era where if you didn't shave your head, you weren't out" to position her experience of being aggressively denied of lesbian identity by a White butch woman who asserted, "when I look at [Parvati] all I see is a woman of color." (Patel, 2019).

In this instance, Parvati's queerness is policed by Western ideas of masculinity and femininity, including the requirement to have a shaved head in order to be deemed a lesbian; in this space in which the White butch woman and Parvati are both minorities, the White woman's ideologies and criteria still prevail, alienating Parvati in a space that is meant to be equally accepting.

Diasporic and Western Cultural Exclusion of Queerness

Among the exclusionary practices and persistence of White queer communities to negate racialized queer experiences, the culmination of cultural upbringings in these racialized communities and the homophobia that is present is to be considered as well. The stigma in racialized communities contributes to the invisibility of queer racialized individuals, as well as discomfort in assimilating to Western society. In Patel's 2019 study, these complications are made explicitly clear as the pseudonymous queer South Asian women relay their own experiences as the diaspora within their families, and separately, within their queer communities. One of these women presents a complicated binary between her falsified romantic and sexual interactions with men; she pursues these relationships in order to appease her parents, while still identifying as a lesbian. In doing this, she has her identity policed by queer White women who do not understand the pejorative pressures that her South Asian parents put on her, which lead her to pursue these relationships (Patel, 2019).

This judgement of one's performance of sexuality by other queer members of the community often leads to feelings of alienation, and invalidation, resulting in an internalized struggle. In this, it becomes increasingly difficult to find solace and areas for liberation as these closeted or "out but not acknowledged" individuals can no longer rely on their community of queer people for support.

Visual Communication as it Increases Queer Visibility

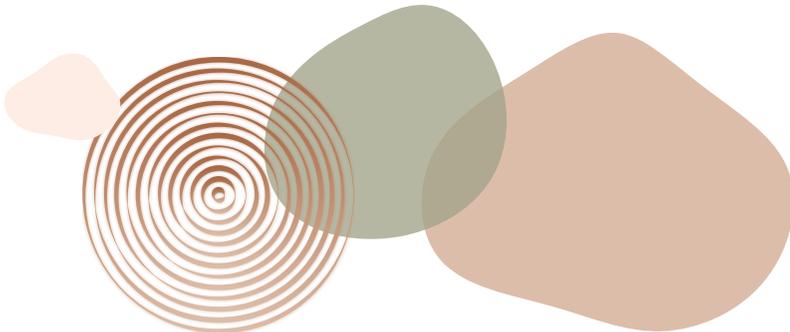
As with many minority groups, queer individuals often come together to seek avenues for liberation and increased visibility, with visual communication being one of the many ways by which this is facilitated. In the past 50 years, LGBTQ+ liberation through graphic design has been documented in its progression from pre-liberation, through to the 90's and liberation as it now exists in the 21st century. In Andy Campbell's *Queer X Design: 50 years of signs, symbols, banners, logos and graphic art of LGBTQ*, he writes of the urgency of recognizing design's role in facilitating liberation and innovation for queer communities (Campbell, 2019). As he explains it, "LGBTQ design is about audacity, trying things out, and sometimes failing," adding that the work that he includes in the book are of "courageous individuals and small groups working together to visualize and imagine new political horizons" (Campbell, 2019). In this collection, it is made clear through the countless symbols, posters, banners, and more, that visual communication has continuously been a method used by LGBTQ+ people to advocate and fight for their existence and rights.

A notable instance of the power of visual communication for queer advocacy is in the AIDS activism work of gay men and lesbian women from the 1980s to early 1990s. During this time, designer Carrie Moyer and photographer Sue Schaffner joined to create Dyke Action Machine! (DAM!) for which they injected posters into advertising campaigns that broke heteronormative standards through lesbian imagery and created a newfound sense of representation (McQuiston, 2019). This radical retelling of the lesbian narrative created visibility for the community group, and ultimately contributed to the initials L, G, and B (Lesbian, Gay, and Bisexual) being used to replace the word "gay" in greater society. This is a clear instance in which advocacy through art and design facilitated acknowledgement of the existence of a queer community group, which would previously have otherwise been overlooked (McQuiston, 2019).

Queer South Asian Organizing Through Visual Communication

In analyzing the creation of visual communication pieces meant to facilitate queer liberation from a Canadian context, one is able to focus on the work created by South Asian artists, which often surround themes of organizing. In Anu Verma's "Remembering and Forgetting: Archiving Queer and Trans 'south asian' organizing in Toronto", her search for archival material from queer South Asians, returns, primarily, pieces from Dosh Pardesh, a political arts festival that occurred from the late 1990s to early 2000s (Verma, 2018). This festival sought to bring the queer South Asian community together to participate in immersive, constructive, and creative expressions of their sexualities, while creating a safe space for these members to feel liberated in their identities, which may have otherwise been shunned in their South Asian communities and white dominated queer communities (Jennex & Eswaran, 2020).

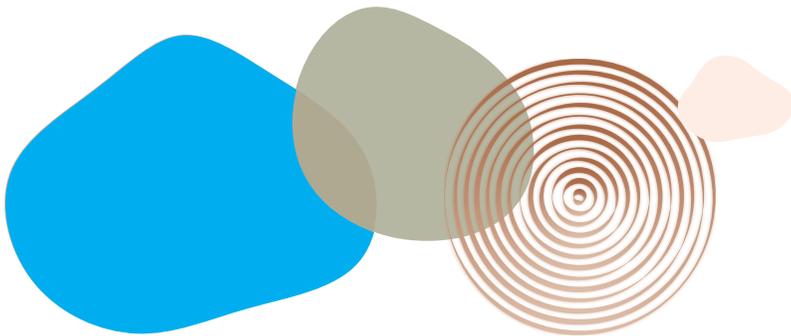
This reigns true in other grass-roots organizing collectives from Toronto, including Khush, which was a collective of South Asian gay men and lesbians devoted to increasing awareness of South Asian culture within LGBTQ+ communities. Archival material from the organization depicts materials designed to invite queer South Asian community members to attend monthly meetings, displaying the use of visual communication to spread inclusive and critical messaging (Jennex & Eswaran, 2020).



Conclusion

Overall, the literature presents a recent shift towards beginning to understand the South Asian queer experience, yet the authors of this work are all of South Asian descent themselves. There is an overarching theme of exclusion of South Asian voices in material that is meant to capture the most significant historical events for queer people.

In recognizing strides made for the LGBTQ+ community as a whole, the creation of visual communication pieces by racialized minorities is not often included or acknowledged to the same extent as white queer individuals, and is especially absent for South Asian artists; this is present in various pieces of literature, including both Campbell and McQuiston's books on political design history. With this considered, it is quite difficult to locate archival work of South Asian queer artists, and even recurring festivals such as Desh Pardesh present a lack of this content. This thesis serves to understand the ways in which queer South Asians have or currently use visual communication to facilitate their liberation, and may now work to explore contemporary artwork and designs in order to bridge the gap between the past and the present.



METHODOLOGY

The point of research that was investigated for this study was the use of graphic design and visual communication by people of South Asian descent in order to facilitate queer liberation. Due to the nature of this study and its reliance on graphic art, qualitative data was required to uncover, in a visual way, how pieces of graphic design allowed for South Asian queer liberation between the late 1990's to the 21st century.

In order to begin to analyze pieces of graphic design, the secondary data to be studied was first curated and selected, which heavily included archival material from the ArQuives in Toronto, Ontario. The majority of work was sourced from this archival group due to their geographical location in Canada, which was highly relevant to the region in which this thesis was written. It also situated the pieces well from a diasporic perspective, encompassing queer people who lived in Canada but came from South Asian descent. The ability to access these archival materials was granted through Associate Professor of English, Dr. Craig Jennex at Ryerson University, who authored a book on the ArQuives and guided the use of these materials. Other areas from which materials were sourced included books on the history of queer graphic design and liberation, as well as social media platforms of artists and organizations who posted their work. The archival materials were selected for their credibility, as they came from a highly reputable source, which happened to be the largest LGBTQ2+ archive in the world ("Canada's LGBTQ2 Archives", 2020). The social media materials were selected as they were primary sources that came from the artists firsthand. In general, it was found that material created by South Asian queers was scarce and difficult to find, making it easier to hone in on the few examples that were indeed present.

The methodological approach taken for this study was a visual analysis. In qualitative research methods, visual research surrounds what is physically seen by the human eye, which encompasses photographs, artwork and other imagery (Lincoln, & Denzin, 2013).

This is discussed in *Collecting and Interpreting Qualitative Materials*, in which Lincoln and Denzin write of this interpretation of visual content and how it is “mediated by physiology, culture, and history” (Lincoln, & Denzin, 2013). This mode of researching was therefore highly relevant to this thesis, which seeks to interpret visual materials within a South Asian cultural and historical context.

The visual analysis that was conducted consisted of several criterions, of which each piece of graphic design or illustration was compared against. The criteria was broken down into several components, each one being a fundamental of graphic design. In Chapter 3 of *Graphic Design and Print Production Fundamentals*, design is broken down by its most important aspects, including visual elements and compositional principles. Within the text, these visual elements are described as “basic things that can be seen”, and encompass multiple aspects of design, including point, line, plane, colour, and typography. Compositional principles build upon the visual elements, as they are described as rules that “can be used to generate content as well as organize it” and include alignment, contrast, hierarchy, emphasis and more (Collins et. al, 2015).

For this study, a combination of visual elements and compositional principles were selected to be in the visual analysis, including colour, typography, hierarchy, and emphasis. These were chosen based on their universality and the ability to analyze them within each unique piece of design. In addition to these, content (logos, imagery, lines of text), and medium/end use (print, digital) were categories that were created as well, in order to capture the full visual context of each piece and understand how it was shared.

These key categories guided the actual questions upon which to extract and analyze information, which were organized into the chart below to facilitate ease of note taking. Within these charts, visual data that can be seen by the eye was recorded, while the analytical guiding questions were explored, if applicable, in the succeeding discussion.

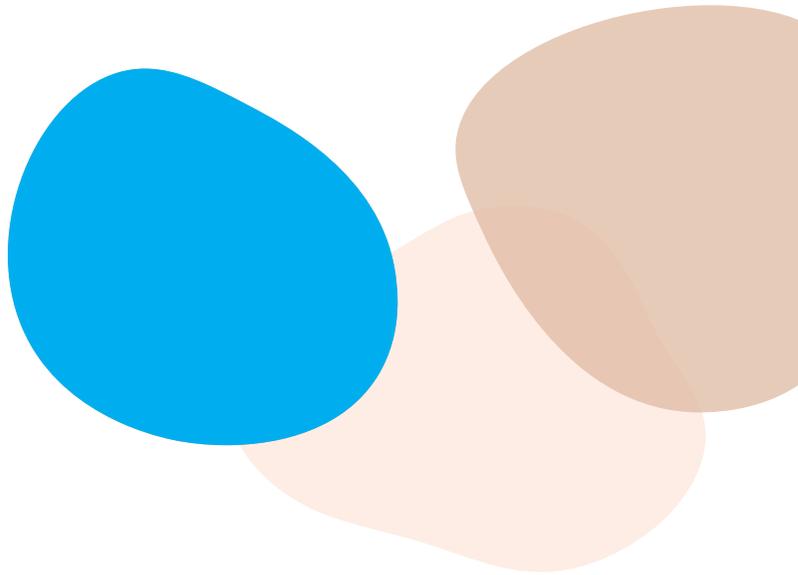
Visual Analysis Criteria

DESIGN FUNDAMENTALS	GUIDING QUESTIONS
Colour	What colours have been chosen in this work? What is the lightness and or saturation of the colours used? How many colours have been used?
Typography	What typefaces have been chosen in this work? Are they easily accessible by a designer? (e.g. expensive price, free) What language is the text set in?
Content	What type of content (e.g. imagery) is deliberately excluded or included? Who is represented in this work? How outwardly is queer sexuality depicted and expressed?
Hierarchy and Emphasis	How have colour, text, and content been manipulated to create hierarchy and emphasis?
Medium	Has the work been designed for print or digital? Who can access this work? Who is the intended audience of this work? Could the piece be adapted to other formats and how easily/conveniently? (e.g. a brochure, over a poster)

This methodology was selected for this study as it was most relevant to the subject at hand. The research question seeks to uncover how graphic design facilitates liberation for queer South Asians; the most viable method in understanding this was to deconstruct design pieces and analyze how each fundamental attribute contributes to creating an overall sense of liberation. Apart from its relevancy, the visual analysis method was also chosen as it was recommended by the thesis supervisor, Loyal Shuman, whose expertise lies in critical design studies. Another approach that could have been used is participatory research, which would involve speaking directly to queer South Asian artists in either a focus group or interview setting to understand their individual experiences from a primary research standpoint. This approach, however, presented a few different challenges. Firstly, the duration of this study did not span long enough to search for, contact, and organize meetings between

queer South Asian artists, and obtain viable research results in the required time. As well, as is true with the pieces of design work, it was rare to find queer South Asian artists in general as their existence is not entirely well known.

Limitations of this visual analysis method included the inability to ensure that the study addresses queer South Asians' experiences from multiple demographics, as specific quantitative data such as age, gender identity, country of origin, etc. could not be specifically tracked. In countering this argument, however, there was not much existing data on queer South Asians to begin with, and the pieces that were selected addressed a range of gender identities from HIV AIDS collectives for those identifying as men, the creative work of a queer South Asian artist who identified as a woman, and general events such as a queer South Asian arts festival, to which all were invited and participated, including women, men and gender non-conforming individuals, from a variety of ages and sexualities.



RESULTS

Khush: South Asian Gay Men of Toronto Handbill



Figure 1a. (left) and Figure 1b. (right): *Front and back of Khush handbill.*
Source: (Jennex & Eswaran, 2020)

Table 1. Visual Analysis: Khush

DESIGN FUNDAMENTALS	RESULTS
<p>Colour</p>	<p>There is one dominant colour used in the handbill, which is green. The shade of green is dark, at a low lightness level. It is not overly saturated at a bright green, nor desaturated at a green that appears closer to grey, but sits in between the two. The background appears to be white, assumed to be the colour of the paper, indicating the use of only one ink overall (green) in the piece.</p>
<p>Typography</p>	<p>Almost all of the type in the handbill is set in ITC Novarese Bold Italic, except for one line, “Confidentiality guaranteed” which is set in ITC Novarese Ultra. These typefaces each cost \$42.99 present day. All of the text is set in the English language. The name of the organization, “Khush”, is a Hindi/Urdu word that translates to “happy”, written using the English alphabet.</p>

- Results continue on the next page -

Content

The handbill contains minimal graphic elements and symbols, with an eight-pointed star included on both the front and back sides. The rest of the handbill contains only text, and the design is not overly complex as it is composed mostly of these blocks of text. There are no outward depictions of queer sexuality apart from the organization description for Khush, "South Asian Gay Men of Toronto."

Hierarchy and Emphasis

Figure 1a: Colour, text and content work together to create hierarchy and emphasis as the cover is predominantly green, with white text in large, bold font. The minimal white content against the dark background puts emphasis on the white elements, and the viewer's eye is immediately drawn to the star symbol and the word "Khush."

Figure 1b: The line "Confidentiality guaranteed" is the only piece of text that is not italicized, and it is bold in the heaviest weight out of all text, emphasizing the singular line. There is a hierarchy in information presented as the majority of text is placed close together in paragraphs, yet "Join us" is on a singular line, drawing attention to the inviting words.

Medium

The handbill has been designed for print use, at a specific size of 3.477 x 3.687 inches. This was distributed in person to visitors of the Toronto neighbourhood known as The Gay Village. The intended audience of the piece is South Asian gay men. Aspects of the design could be adapted to other formats (e.g. the front cover could be replicated on a button pin.) The handbill could be redesigned into a poster with only the back cover for hanging in local areas.

ASAP: Alliance for South Asian AIDS Prevention Handbill

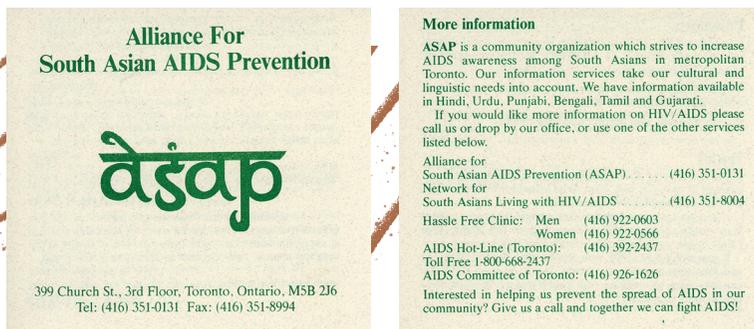


Figure 2a. (left) and Figure 2b. (right): *Front and back of ASAP handbill.*
Source: (“Alliance for South Asian,” n.d.)

Table 2. Visual Analysis: ASAP

DESIGN FUNDAMENTALS	RESULTS
<p>Colour</p>	<p>One colour is used in the handbill, and it is the colour green. The shade of green is neither light nor dark, but midtone. It is at a medium saturation level, with higher vibrance. The background is off-white, assumed to be the colour of the paper of which it was printed on, indicating the use of only one ink overall (green) in the piece.</p>
<p>Typography</p>	<p>All of the type is set in the Times New Roman typeface, with two variations being Times New Roman regular, and Times New Roman bold. The cost of the font variations is \$65 each. All of the text is set in the English language. The name of the organization, “ASAP,” is written using the English alphabet, but has been manipulated to incorporate Devanagari, the script used to write Hindi, in a modern form.</p>

- Results continue on the next page -

Content

This handbill contains information for (ASAP) the Alliance For South Asian AIDS Prevention in Toronto. It contains information on the organization, their services, telephone numbers and additional resources for community members to turn to. There is no outward depiction of sexuality, but rather a hint towards it, as HIV/AIDS predominantly affected gay men.

Hierarchy and Emphasis

Figure 2a: Colour, text and content work together to create hierarchy and emphasis as the front side has a light background, with bold, green text that stands out against it. There is hierarchy in the content of information, as the full organization name is at the top, followed by the acronym (ASAP) in the largest type, as the central point. Below is the most crucial information about the organization, including its location and telephone number.

Figure 2b: On the backside, emphasis and hierarchy are simultaneously created as there is a heading "More information" at the top that sits alone as a line of text and is the only bolded piece, apart from the "ASAP" acronym. Descriptive lines of text follow below in paragraph style, followed by singular lines that contain telephone numbers with dotted lines to follow along with the flow of information easily for each organization.

Medium

The handbill has been designed for print use, at a specific size of 3.918 x 3.427 inches. This was distributed in person to visitors of The Village. The intended audience of the piece is South Asian gay men who have been affected by HIV/AIDS or are seeking help in its prevention. Aspects of the design could be adapted to other formats (e.g. the asap text in Devanagari script could be replicated on a button pin.) The handbill could be redesigned into a poster with only the back cover for hanging in local areas.

Desh Pardesh Newspaper Article

This pink triangle has a brown lining

urvashi vaid is keynote speaker at desh pardesh



Vaid's vision: Activist Urvashi Vaid says we need a "common ideology."

Desh Pardesh: Conference & Festival Features The Politics Of South Asian Cultures in The West. Feb. 14. Evening program: 8:00pm. 8:30pm. Morning panels: 12 West, Mar 24-26, Mar 28. Tickets: The Center, 2111 16th St, Westport, 788 King St, John Spotton Center, 125 20th 952.

Story by Kaushalya Bannerji

Urvashi Vaid

is one among many gay and lesbian participants in Desh Pardesh, an annual Toronto festival of progressive South Asian culture in the West.

Vaid, a lawyer and former executive director of the US National Lesbian and Gay Task Force (NLGTF), is the keynote speaker for the festival which, in the past couple of years, has won a large queer following. She is probably best known for her confrontation with ex-President George Bush. At an AIDS conference in March 1990, she interrupted the President's first and only policy address on AIDS and HIV by holding up a sign that read: "Talk is Cheap, AIDS Funding is Not. Remember Gay People With AIDS." She also denounced the Republicans' "lack of record on AIDS funding and, in the end, was escorted out by the Secret Service. She was threatened with arrest if she returned to the conference.

When criticized by more conservative lesbians and gays who felt her direct action tactics were unbecoming to an executive director of a national lobbying organization, Vaid responded: "I don't agree. That's exactly what I should be doing."

During her recent interview with Vaid, she spoke about her six- and a-half year involvement with the Task Force, the most prominent US gay and lesbian lobby group. She brought 10 years of community activism to the NLGTF, having worked in grass roots political groups fighting violence against

women, as well as participating in Sissieriff, Washington's annual women's music festival, and other feminist cultural events.

Like many an activist-turned-pundit-organizer, Vaid says she got involved as the Task Force's full-time media director because she was "tired of choosing between full-time work" to pay the rent and her growing "commitment as a volunteer activist on lesbian and gay rights."

Co-ordinating media and public relations for three years at the NLGTF allowed her to both pay the rent and work with a gay organization feared by the Republican-controlled White House. The Task Force funded and fought legal efforts to re-institutionalize homosexual-

ity, made homophobic discrimination and hate crimes a prime time media topic, and lobbied hard for increased AIDS funding.

When Vaid was hired as the Task Force's executive director, she found the scope of its work broader than her previous local, activist projects. But whether addressing city councils or Congress, she says, the process is basically the same. However, she did notice an absence of women at the national level of gay and lesbian organizing. In contrast, she notes that women are often the key strength of smaller local or state-wide organizing, such as last November's No On 9 campaign in Oregon.

Vaid feels she was expected to fail as executive director. "I was a woman of colour leading a white male organization." She was the only woman to reach the organization's upper echelon; most of the other women were secretaries. Although often controversial, Vaid left the Task Force in the best financial shape of its 20-year history. In 1992, its operating budget was approximately two million dollars.

Although never involved in the South Asian community as an activist, Vaid stresses that "I feel Indian. My family and upbringing was very Indian-identified culturally." Fighting heterosexual racism has been difficult, however. She's experienced both overt and subtle manifestations of racism in the mainstream gay and lesbian communities.

Vaid feels that the movement for racial justice has been hampered by the progressive community, in general, has ghettoized itself by becoming a series of fragmented, identity-based, single-issue organizations. She attributes this to a "failure to develop a common ideology" that can incorporate the various relations of power in con-

temporary US society. This task is urgent, since the right-wing has successfully maintained unity, sharing a homophobic, racist and sexist agenda that places conventional family values center stage.

Vaid says involved despite such obstacles. "For me activism is important," she says. "It gives me a sense of optimism."

Arts & Issues

DESH PARDESH'S QUEER HIGHLIGHTS

Here are just a few events of interest to gays and lesbians. Consult the program for more lengthy listings.

- South Asian Women In-Sight. Visual art kicks off the festival in an exhibit curated by Sharon Fernandez. Free. 9:30pm. Mar 24. An Metropole.

- NamYoni. All women are welcome to the launch of this journal for lesbians of South Asian descent. Free. 5pm. Mar 25. Epicure. 512 Queen W.

- Causes: Mar 26. HIV-positive South Asians. 10:00pm. 45 Carlton. Apr 17:15. Lesbians At Desh Conference. noon-2pm. Art Metropole. Gay Men. noon-2pm. Pines. 318 Church. Women At Desh. 2:15-4:15. Art Metropole.

- Nach Musik. Hosted by CKLN's Masala Mixx, Vancouver's Indo Fijian pop-dancer singer Kavita, San Francisco's intra-national musical Saxe Lawji and the UK's Ravi. PWYC-\$10. 9:30pm. Mar 26.

- California Dream. 177 Peter (new location).

- Running From The Family. A panel, including Urvashi Vaid, discusses "family values." 7:2pm. Mar 27. The Esail.

- This Pink Triangle Has A Brown Lining. Out Society. Asians mix it up, with featured speaker Urvashi Vaid, writer Shyam Selvadurai, the premiere of Shami Moooi's new video, Wild Women In The Woods, and more. 5:00pm. Mar 27. The Esail.

- AIDS Activism Workshop. Community activists, educators and HIV-positive people share strategies for South Asian communities. Free. 11am-1pm. Mar 28. An Metropole.

- The Best Of Prithiba Parmar. Films by the lesbian London filmmaker include A Place of Rage, with Justine, Angela Davis and Alice Walker. \$6. 5:30pm. Mar 28. John Spotton.

MAR 19, 1993

PAGE 21

Figure 3. Newspaper promoting the queer South Asian art festival Desh Pardesh. Source: ("Desh Pardesh," n.d.)

Table 3. Visual Analysis: Desh Pardesh

DESIGN FUNDAMENTALS	RESULTS
Colour	<p>There are three colours used in the newspaper, including red, pink, and black. The red tone used in the headline text is bright and highly saturated. The pink that is overlaid on top of body text is less saturated than the red yet it is still bright against the dull brown of the newspaper. There are various shades of grey used, which are apparent in the photograph included in the newspaper.</p>
Typography	<p>There are three main typefaces used in this newspaper design. The headline text “This Pink Triangle Has a Brown Lining” is set in ITC Kabel Ultra, while smaller headlines are set in ITC Kabel Demi and ITC Kabel Regular. In every use of this typeface, the text appears to have been condensed (vertically or horizontally). The heading “Desh Pardesh Queer Highlights” is set in the typeface Metropolitaines. The rest of the text in the newspaper is set in a serif typeface, which is too small to identify but appears very similar to Times New Roman. Present day, ITC Kabel costs \$41.99 per variation, as well as Metropolitaines. The price of the serif typeface is unknown. All text is set in the English language.</p>
Content	<p>The newspaper contains blocks of text and a photograph of a South Asian activist, Urvashi Vaid. The focus of all content is to promote Desh Pardesh, a South Asian queer Arts Festival in Toronto. The design follows the standard structure of newspaper articles with a three-column layout. Queer sexuality is depicted and expressed through the inclusion of the words “queer” throughout and the image of Vaid, who identifies as LGBTQ+.</p>

- Results continue on the next page -

Hierarchy and Emphasis

In the newspaper article, hierarchy and emphasis work together to convey the most important information. A hierarchy of information is presented, with a heading at the top, followed by an image and columns of neatly organized text. The layout of the newspaper includes negative space and bounding boxes around important content emphasizing its separate components. Colour and text work in conjunction, as the eye is drawn to the heading for its bright colour and bold type. At the bottom of the article, the text “Desh pardesh’s queer highlights” is set in a unique typeface that draws the viewer in, and this title, as well as the text below, is all contained within a pink square background. As this is the part of the article that contains the most colour, emphasis is immediately put on it and its message.

Medium

The newspaper article has been designed for print, and would likely have been distributed to local residents of the city. There is no certainty about the ability of people outside of Toronto to access this article, though it may have been shared across cities. The intended audience is the LGBTQ+ community, indicated by the text “Here are just a few events of interest to gays and lesbians” under the highlights section, followed by events succeeding the publication date of the newspaper by 5-9 days. This piece could be adapted to other formats, such as a poster or flyer which simply contains the Desh Pardesh Queer Highlights section, in order to distribute to queer citizens to attend.

Gaysi Poster - Indian Penal Code Section 377



Figure 4. A poster created by Korishma Dorai for Gaysi in 2014 during elections in India. Source: ("Gaysifamily," n.d.)

Table 4. Visual Analysis: Gaysi

DESIGN FUNDAMENTALS	RESULTS
Colour	This design makes use of every colour of the basic colour spectrum (ROYGBIV) with variations of these colours and additions throughout. Shades of black, white, and grey have also been used. Notably, a shade of brown has been used in the graphic of the person, representing the skin tone of a South Asian person. The overall colours are bright and highly saturated. Sixteen colours have been used in this design.

- Results continue on the next page -

Typography

One main typeface has been used in this work for the two lines of text, which appears to be Nexa Rust Sans Book. There is a small piece of text that states “377”, which is set in a bold, sans serif typeface. The cost of Nexa Rust Sans Book is \$31.99. The cost of the bold, sans serif typeface is unknown. All of the text in the graphic is set in the English language.

Content

This piece contains a graphic of what appears to be a man, who is holding a flag in one hand and a handcuff in the other. From the Indian context and the brown skin tone of the man, it can be concluded that he is South Asian. There is a depiction of queer sexuality as the flag that he is holding includes the colours of the rainbow pride flag.

Hierarchy and Emphasis

There is a hierarchy of information in this design as the main lines of text sit at the very top of the design, and the very bottom of the design. In between is all of the graphic content, including the depiction of the man, the flag, and handcuffs. This structure creates a strong flow from the top to the bottom of the design, as the viewer absorbs the content step by step. There is emphasis placed on the top line of text as it is set in capital letters, which suggests a dominant voice. It also exists as a single line of text that is surrounded by negative space, which further adds to the feeling of emphasis.

Medium

This piece has been designed for both print and digital. It was originally created for resharing on the @gaysifamily digital platform in 2014. However, in 2015 it was published in the first Gaysi zine on a digital magazine platform (Issuu), as well as in print issues delivered to customers. Through the open sharing of the graphic on the internet, it is widely available and accessible around the world. The intended audience is the political parties in India that were not vocal about their stance on Section 377 of the Indian Penal Code.

Priyanka Paul Illustration

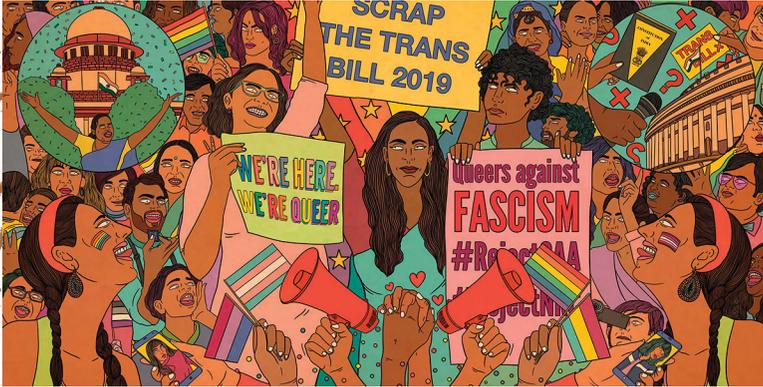


Figure 5. An illustration created by queer Indian artist, Priyanka Paul.
Source: (Balram, 2020)

Table 5. Visual Analysis: Priyanka Paul

DESIGN FUNDAMENTALS	RESULTS
Colour	This design makes use of every colour of the basic colour spectrum (ROYGBIV) with variations of these colours and additions throughout. The most common colour is brown, with shades used from light to dark, representing the diversity of skin tones of South Asian people. The overall colours used are bright and saturated, rather than dull and desaturated. There is a high number of colours and shades used.
Typography	There are two dominant typefaces used in this work, which are Helvetica Bold and Alternate Gothic Condensed ATF Bold. These typefaces make up the majority of the signage in this graphic. At a very small point size, in the "Constitution of India" graphic, a serif typeface has been used to match the typeface used on the actual Constitution of India. The exact typeface and cost is unknown. All text is set in the English language.

- Results continue on the next page -

Content

This graphic contains illustrations of various South Asian people, holding up signs in protest of The Trans Bill 2019 in India. Several of these people are wearing traditional Indian clothing, and the Indian flag is included as well. There are several depictions of queer sexuality through the inclusion of LGBTQ+ flags including the rainbow pride flag, as well as the lesbian, bisexual, transgender, pansexual, and asexual flags. The people in the graphic are holding these flags and wearing them on their faces, as well as embracing each other in hugs and holding hands to signify queer love.

Hierarchy and Emphasis

Though there are many different images being shown in the graphic, a sense of hierarchy is created through the way that the content is depicted. Overall, the graphic contains visuals of people, and more detailed visuals are placed within circles at the top of the graphic to guide the viewer's eye and establish focal points. There is emphasis placed on these areas as they are the only graphics that are contained within a geometric shape. Colour and type has been manipulated to create emphasis as well, as the text in the signs that people are holding up is large, bold, and filled with a variety of bright colours that catch the eye.

Medium

This graphic has been designed for use in digital platforms. It was originally created by Indian illustrator Priyanka Paul as a header for an article in a South Asian journal called the Juggernaut. Though the journal requires a subscription to view online, the graphic has since been reshared on Priyanka's Instagram account @artwhoring, allowing for widespread access and sharing of it. This piece could easily be printed in a physical copy of the Juggernaut or by those interested in spreading it around India.

DISCUSSION

The results of this study indicated various ways in which the South Asian queer community has used graphic design as a method to communicate, liberate, and advocate for themselves, ranging from the time period of the 1990s to present day. The fundamentals of design that were most relevant for each respective visual are discussed.

Khush: South Asian Gay Men of Toronto

When looking at the handbill for Khush, several aspects of the design reveal a greater message about the organization and the audience that they serve. Firstly, the most dominant colour, and the only colour used in the design of the handbill is green. The colour green is present in several flags of South Asian countries, and the dark shade used in the Khush handbill is particularly prevalent in the national flags of Bangladesh, Sri Lanka, and Pakistan.



Figure 6. (Left to right): *The flags of Bangladesh, Sri Lanka and Pakistan.*
Sources: (“BD Bangladesh,” n.d.), (“LK Sri Lanka,” n.d.), (“PK Pakistan,” n.d.)

This use of green is highly significant in establishing a sense of cultural identity between the organization, which was a group of gay South Asian men, and the audience that the handbill was target to, that being other South Asian gay men in Toronto. The subtle use of a prominent South Asian colour allowed for recognition of a collective identity that viewers would feel familiarity with and therefore feel more welcomed and drawn to the space.

Similarly to colour, it is important to note the intentionality by which typography has been used to convey a specific message. The name of the organization is spelled using the English alphabet, but spells

the word “Khush”, which translates to “happy” in both Hindi and Urdu. By using a word that South Asian Hindi and Urdu speakers would recognize, a sense of identity and inclusion is created once again, and the positive connotations of the word “happy” suggest that Khush is a welcoming place.

In addition to this, on the backside of the handbill, there is only one line that is not set in italics, which reads “Confidentiality Guaranteed.” Through the use of bold text and the design fundamental of emphasis, this line particularly stands out from the others. Designed at a time where homosexuality was not as accepted in society, the use of such messaging is important as it creates a sense of inclusion and safety from being outed to one’s community. This, in turn, allows for these men to liberate themselves as they are given freedom to express their sexualities in this space with similar queer men, even if they cannot do so in their homes.

Although there are no explicit depictions of queer sexuality apart from the word “gay”, the star present on both sides resembles the nautical star tattoo, an early symbol of identity for lesbians (Campbell, 2019). This tattoo was worn at the top of the wrist, in a location that could easily be hidden by a watch but was a clear indicator of their identity (Campbell, 2019). Though the star in the Khush branding has eight points, the resemblance is interesting to note as Khush went on to expand to include not just gay men of Toronto, but lesbians as well.



Figure 7. *The nautical star tattoo.*
Source: (Campbell, 2019)

ASAP: Alliance for South Asian AIDS Prevention

The handbill created by ASAP, the Alliance for South Asian AIDS Prevention is also quite deliberate in its design choices. Much like the Khush handbill, there is a dominant green presence in the ASAP handbill, matching the green used in the Indian flag.



Figure 8. *The flag of India.* Source: (“IN India,” n.d.)

In addition to this connection to the flag, the ASAP text on the front of the handbill is written using the English alphabet, but carefully incorporates letterforms from the Devanagari script, which is used to write the Hindi language, commonly spoken in India (Kopparapu & L, 2018).



Figure 9. *A comparison between the “asap” text and Devanagari script alphabet.*

Sources: ASAP: (“Alliance for South Asian,” n.d.).

Devanagari: (Kopparapu & L, 2018)

The deliberate inclusion of both the green colour and the Hindi script is significant in signalling and calling to queer South Asian members of the diaspora who may observe these handbills in Toronto. Without explicitly using Hindi script to write the text, it remains accessible to a variety of South Asian diasporic queers who may not speak their ancestral tongue, yet also pulls in those that do, and provides a sense of familiarity and overall safety.

Notably, the text within the handbill states, “Our information services take our cultural and linguistic needs into account. We have information available in Hindi, Urdu, Punjabi, Bengali, Tamil and Gujarati,” all of which are South Asian languages (“Alliance for South Asian,” n.d.). It is clear that this organization considers the intersections of race and queerness, as it understands that certain members of the community may need access to translation services. In addition to this, the handbill format by which the piece is designed is especially helpful in communicating information, as it was near 4 x 4 inches, quite a small print size. This size makes it suitable for carrying it around in one’s pocket or wallet, as an easy and accessible way to access AIDS prevention services.

Desh Pardesh

In the newspaper article promoting Desh Pardesh, a queer South Asian arts festival that ran from the 1990s to early 2000s, there are several aspects of the design that stand out. Firstly, the way in which the bright red and bold type are used in the piece creates emphasis in the heading, which reads: “This pink triangle has a brown lining.” In this context, a prolific symbol of homosexuality is mentioned, known as the pink triangle.

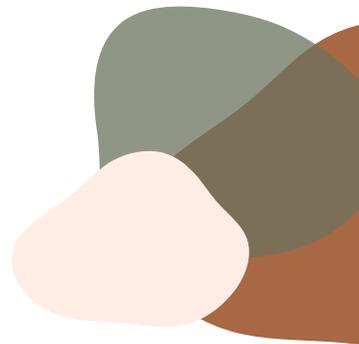


Figure 10. *The pink triangle.*
Source: Campbell. (2019).

The pink triangle was a symbol that was initially mandated by Nazi Germany as an identifier to be worn by gay men (Campbell, 2019). In recent years, it has seen a reclamation by the LGBTQ+ community, who have used it in their own campaigns. This commentary on the pink triangle having a brown lining hints to South Asian identity with the word “brown” to denote skin tone. The statement is powerful in communicating that queer activism is also lined by the work of South Asians and that their contributions are indeed important.

In addition to the title text, there is significant content within the newspaper, including an image of a South Asian LGBTQ+ activist named Urvashi Vaid (“Urvashi Vaid,” n.d.). At a time where identities of queer South Asians were mostly hidden, as seen in the Kush handbill, the outward depiction of a queer woman in a newspaper article is noteworthy.

Another area that stands out in the design of the newspaper is the unconventional use of colour overlaid with a block of text. Behind the “Desh Pardesh’s Queer Highlights” text is a rectangle filled with pink, that both highlights and draws attention to the summary of Desh Pardesh’s scheduled activities. The main message of the newspaper article is to promote the upcoming events of the Desh Pardesh festival, including the text “Here are just a few events of interest to gays and lesbians. Consult the program for more lesbian listings” (“Desh Pardesh,” n.d.) The use of the pink graphic device to draw the viewers in, followed by the text inviting them to the event, is highly effective in conveying the message that Desh Pardesh is a place where queer South Asians can gather to celebrate their sexualities through art.



Gaysi

Unlike the previous pieces of design, the poster created for Gaysi Family, a social media platform showcasing queer South Asian work, centers around legislation in India. Designed in 2014, the poster acts as a commentary on the silence of politicians in India surrounding the topic of Section 377 of the Indian Penal Code, which criminalized acts of homosexuality by deeming sexual interactions between the same sex as an offence when gay marriage was not yet legalized in the country (Gupta, 2006).

The components of the design work together to effectively create a commentary on the silence of these politicians, as the main graphic appears to be of a man holding up a flag that contains several colours of pride, including those of the original flag designed by Gilbert Baker, as well as the Bisexual flag.



Figure 11. (Left to right). *The Gilbert Baker Flag and Bisexual Flag.*
Source: (Campbell, 2019)

While there is a clear representation of queer South Asians in this piece, there is more notably a representation of how these individuals have been identified to be criminals and prisoners by the Indian government. This is clear through the handcuff in the man's hand, the "X" covering his mouth, and the use of the colour orange for his shirt, which is a colour typically worn by prisoners in jail.

After analyzing the way in which queer South Asians are constrained in this image, one must also observe how the design elements come together to break free from and resist these constraints in order to fight for liberation. An example of this is the use of text at the top, which reads: "SILENCE SPEAKS LOUDER THAN WORDS" ("Gaysifamily," n.d.).

This text is set in all capital letters and is placed on its own line, creating a stark contrast between the background and the text. The use of this hierarchical structure is effective in conveying the message of the text, which is at quite a small point size but is still powerful, mimicking the use of something as simple as silence to send a powerful message. In addition to this, small details have been included such as the branded “377” stamp that has been crossed out, as well as the use of the colour white in the hair of the man, which is commonly thought of as a sign of old age. As a policy that was created over a hundred years ago, the old age of the man is a commentary on not only how outdated it is, but also how the fight to eliminate it has been going on for years.

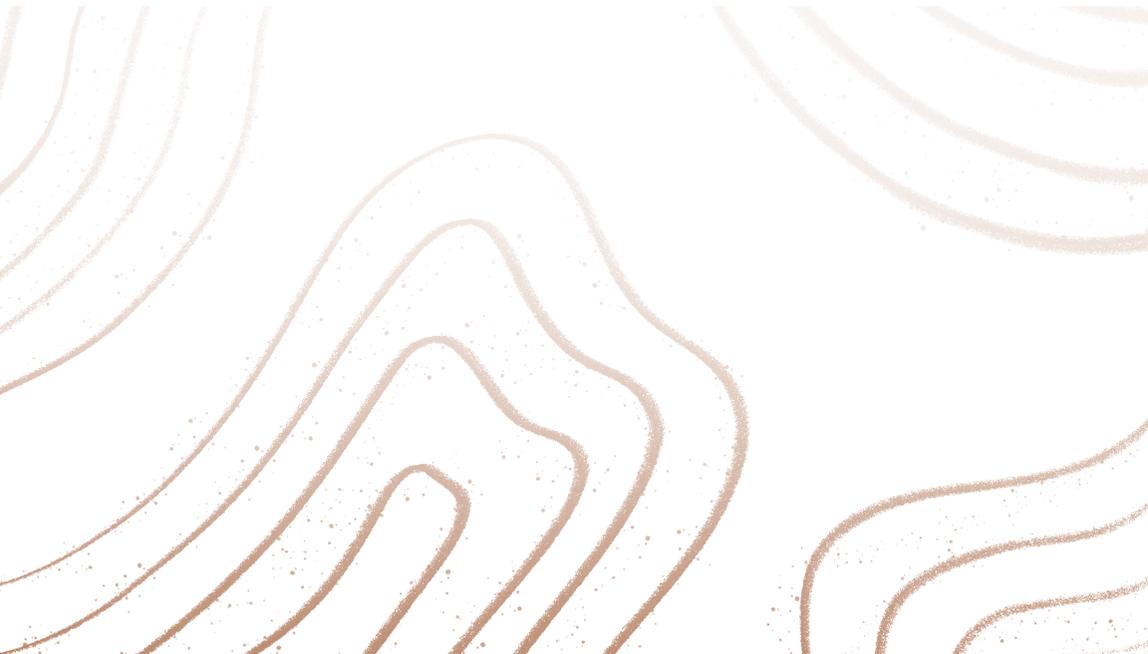
Priyanka Paul

The illustration created by queer South Asian artist Priyanka Paul also makes a commentary on Indian legislation through the careful use of colour, content, and medium. In Paul’s piece, there are perhaps the most outward depictions of queer sexuality by South Asian people of all the visuals that have been analyzed. Not only are these people waving and wearing flags of multiple different sexualities that fall under the queer term, but they are also holding colourful signs of protesting, communicating their existence to the world with text such as “WE’RE HERE, WE’RE QUEER” (Balram, 2020). There is also a sign that reads, “SCRAP THE TRANS BILL 2019”, which acts as a direct callout to the Indian government to make changes to the 2019 Trans Bill, which currently requires trans people to provide proof of medical transitioning in order to identify as transgender (Glazer, n.d.). The use of big, bold text puts emphasis on the messages in the posters, and the saturated and dominating colours of pride, contrasted against the shades of brown in the skin tones of the people, are effective in illustrating the vibrance that is created when people of various appearances and sexualities unite to collectively fight for liberation.

Though originally designed for use in a journal known as the *Juggernaut*, Paul has shared the graphic on her Instagram account several times, allowing it to be accessed by her following on the

platform. As an application that allows for the resharing of posts and knowledge with a press of a button, her choice to use Instagram to share the illustration is highly inclusive and accessible for all. It allows for easy dissemination of the knowledge, and further advances the goal of spreading the message in hopes of enacting change in the country.

Overall, the results have communicated several ways in which design fundamentals have been used by queer South Asian artists to form messages of safety, inclusion, and political uprising. Though this discussion analyzes each piece in detail, there are some limitations of the results presented, which include the fact that the exact details surrounding the creation and distribution of these pieces remain unknown, and can only be assumed. These include the date of creation, the software in which they were created, whether the individuals paid for the typefaces used or obtained them through other means, and where the items were distributed (e.g. the location in which the handbills and newspapers were given out is not entirely known.) Despite these limitations, however, the factual information presented has allowed for an interpretation to be made nonetheless.



CONCLUSION

The purpose of this study was to explore the ways in which queer South Asians have used graphic design to facilitate a sense of liberation for themselves, specifically focusing on the variety of ways that this has been done throughout history.

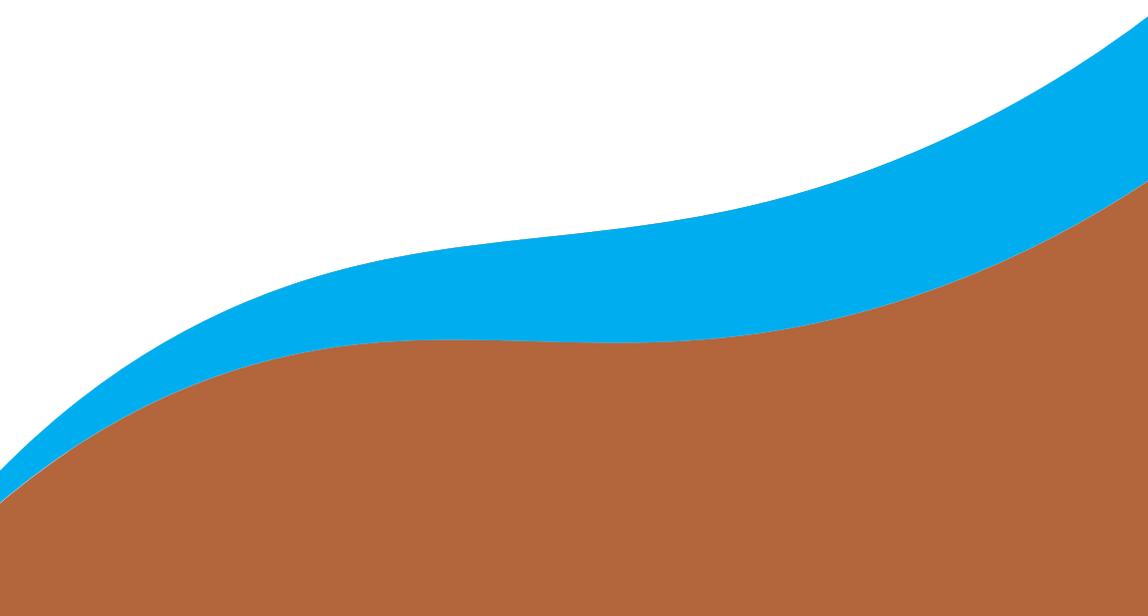
A deeper analysis into the breadth of this work revealed unique ways in which liberation was developed through the creation of these graphic design pieces, influenced by the time period and circumstances in which they were created. Pieces from the 1990s were found to be developed with the purpose of gathering in groups and establishing a feeling of collectivity in which freedom of sexual expression was allowed. This was notable through the organizing of queer South Asian lesbians and gays in Toronto under Khush and the Alliance for South Asian AIDS Prevention, as well as during the queer South Asian arts festival, Desh Perdesh. In each of these instances, visual communication was designed with the purpose of informing the public that these organizations and gatherings existed, and welcoming fellow queer South Asians to become a part of these collectives.

In graphics created during the 21st century, there was a shift in focus to protesting and fighting for homophobic and transphobic laws to be abolished, specifically in India. The visual communication that was created around this time was relentless in calling out politicians to speak up on the injustices that continued to occur towards queer South Asian people, and it held unapologetic depictions of queer sexuality, including the use of several symbols of pride.

In terms of design fundamentals, a repeating pattern was developed in that the pieces as a whole often made use of typefaces that were widely accessible and well-known, including Times New Roman and Helvetica. This brought a sense of universality to the designs and made the communication accessible to as wide of an audience as possible. As the pieces progressed over the years, the inclusion of national and prideful colours and content grew, linking the two ideas together and illustrating how the South Asian identity projects its voice in queer spaces.

Among each of these pieces lies a crucial finding that every piece of graphic design was created with a political purpose. Though some visuals may depict people who are able to freely express their sexuality to the world, more often than not these individuals are protesting for change to be made as the current treatment of queer South Asian people is not equitable or equal to other racialized groups in the LGBTQ+ community. This political root stands true even in designs that were created to promote celebration and gathering of South Asians, as, ultimately, they worked towards creating safe spaces for these people in a world that deliberately excluded and often alienated them. There was less space made to celebrate themselves without worry as can be done at corporatized Pride parades in the Western world, and more space made to protect themselves from those who did not believe it important for their rights to exist.

Overall, as stands true with several other queer communities of colour, the fight for a voice and place in history is never over for this underrepresented group. There is still much left to be researched on how South Asian people continue to use and rethink ways of communication through visual means, and there are several gaps to be filled in books on graphic design history, which have previously failed to mention the graphic art and contributions of queer South Asian groups.



REFERENCES

- Campbell, A. (2019). *Queer X design: 50 years of signs, symbols, banners, logos, and graphic art of LGBTQ+.* New York: Black Dog & Leventhal.
- Canada's LGBTQ+ Archives. (2020, November 24).
<https://archives.ca/>
- Collins, W., Haas, A., Jeffery, K., Martin, A., Medeiros, R., Tomljanovic, S. (2015). *Open Textbook Library. Graphic design and print production fundamentals.*
- Diaspora. (n.d.). <https://www.merriam-webster.com/dictionary/diaspora>
- Getty Education. (2011). *Principles of Design [PDF].*
- Glazer, E. (n.d.). *Rights in Transition: Covert Medical Discrimination & The Effects of Trans Bill 2019.* Retrieved from https://digitalcollections.sit.edu/isp_collection/3208/
- Gupta, A. (2006). Section 377 and the Dignity of Indian Homosexuals. *Economic and Political Weekly* 4f(46), 4815-4823.
<http://www.jstor.org/stable/4418926>
- Jennex, C., & Eswaran, N. (2020). *Out north: An archive of queer activism and kinship in Canada.* Vancouver: Figure.1 Publishing.
- Kanji, K. (2017). *The Gays Aren't All White, The Desis Aren't All Straight: Exploring Queer Subjectivity in the Toronto South Asian Diaspora.*
<https://yorkspace.library.yorku.ca/xmlui/handle/10315/34105>
- Kopparapu, S. K., & L, L. V. (2018, August 01). *Figure 2: Devanagari alphabet set [41].* https://www.researchgate.net/figure/Devanagari-alphabet-set-41_fig2_267454491
- Liberated. (n.d.).
<https://www.merriam-webster.com/dictionary/liberated>
- Liberation. (n.d.).
<https://www.merriam-webster.com/dictionary/liberation>
- Lincoln, Y. S., & Denzin, N. K. (2013). *Collecting and interpreting qualitative materials.* McQuiston, L. (2019). *Protest! A History of Social and Political Protest Graphics.* Princeton; Oxford: Princeton University Press. doi:10.2307/j.ctvfwvrw8

- Patel, S. (2019, July 3). “Brown girls can’t be gay”: Racism experienced by queer South Asian women in the Toronto LGBTQ community. *Journal of Lesbian Studies*.
<https://doi.org/10.1080/10894160.2019.1585174>
- Queer. (n.d.). <https://www.britannica.com/topic/queer-sexual-politics>
- Siang, T. Y. (n.d.). The Building Blocks of Visual Design.
<https://www.interaction-design.org/literature/article/the-building-blocks-of-visual-design>
- South Asia. (n.d.). <https://www.dictionary.com/browse/south-asia>
- Stonewall National Monument (U.S. National Park Service). (n.d.).
<https://www.nps.gov/places/stonewall.htm>
- The visible spectrum. (n.d.).
<https://www.britannica.com/science/color/The-visible-spectrum>
- Typography. (n.d.). <https://www.britannica.com/technology/typography>
- Urvashi Vaid. (n.d.). https://urvashivaid.net/wp/?page_id=2
- Verma, A. (2018, July 12). Remembering and Forgetting: Archiving Queer and Trans, “south Asian, organizing in Toronto.”
<https://yorkspace.library.yorku.ca/xmlui/handle/10315/34749>

Images

- Alliance for South Asian AIDS Prevention (ASAP). (n.d.).
<https://arquives.andornot.com/en/permalink/descriptions15239>
- Balram, D. (2020, July 08). India’s Battle for LGBTQ Rights is Far from Over. <https://www.thejuggernaut.com/section-377>
- BD Bangladesh Flag Icon. (n.d.).
<https://iconarchive.com/show/flags-icons-by-wikipedia/BD-Bangladesh-Flag-icon.html>
- Desh Pardesh. (n.d.). <https://savac.net/collection/desh-pardesh/>
- Gaysifamily. (n.d.). The Gaysi Zine: Queer Graphic Anthology Is HERE! : Order NOW! https://issuu.com/gaysifamily/docs/the_gaysi_zine_4_preview
- IN India Flag Icon. (n.d.).
<https://www.iconarchive.com/show/flags-icons-by-wikipedia/IN-India-Flag-icon.html>

LK Sri Lanka Flag Icon. (n.d.).

<https://www.iconarchive.com/show/flags-icons-by-wikipedia/LK-Sri-Lanka-Flag-icon.html>

PK Pakistan Flag Icon. (n.d.).

<https://www.iconarchive.com/show/flags-icons-by-wikipedia/PK-Pakistan-Flag-icon.html>

APPENDIX

Visual Analysis (Discussion)

DESIGN FUNDAMENTALS	RESULTS
Colour	What is the significance of these specific colours in relation to cultural identity and/or nationalism? Do these colours relate to established LGBTQ+ symbols? (e.g. flags) What is the significance of these colours in signalling sexuality or gender identity?
Typography	What does the use of text seek to communicate here?
Content	What does the level of design complexity suggest about the creator of the piece? Is the style of design more catered towards aesthetic, or need?
Hierarchy and Emphasis	What is the significance of these design choices in expressing cultural identity and/or nationalism? In what ways does hierarchy and emphasis create inclusion and safety?
Medium	How does the medium impact the way in which the information is shared?

05

**Living Past Expectations: An
Analysis on Print Marketing
Materials' Integration
Amidst the Digital Age**

Erin Navarro



ABSTRACT

Within the past decade, major technological advancements allowed for consumers and businesses to relocate a variety of their daily activities from a physical to digital platform. The following paper will discuss the current stance of print-related marketing materials and its potentiality for future endeavours in relation to the rise of digital platforms, alternatives, and shifting consumer expectations. This study will review consumer perception toward both print and digital mediums between the years of 2010-2020, detailing the trends and factors that mentally pull the consumer in either direction. Currently thriving methodologies of print, digital, and integrative marketing strategies will also be considered for the purpose of seeking the benefits that are provided from each individual platform, relating each approaches' effectiveness toward consumer needs and expectations. To support the analysis, the study sees the distribution and execution of qualitative questionnaires and personal interviews toward experienced industry professionals and scholars. These surveys help to provide further insight of the changes that different businesses are conducting in order to accommodate for the seemingly increasing consumer usage of digital devices. In addition, respondents also help to provide their personal opinions and expectations of trends for effective marketing strategies, taking into account the effectiveness and concentration of each related material (physical and digital) in their respective fields. Alongside discussing the gradual shift of consumer demand across a year-by-year basis, sudden disruptions and changes within the industry that are provided by the challenges of the worldwide pandemic, COVID-19, are also acknowledged. The analysis and discussion will suggest that print-based marketing material is not dying, and cannot be entirely cannibalized by digital alternatives. However, considering that digital marketing's effectiveness can tend to outweigh that of print in a number of areas, this does not mean the continued use of print marketing materials is not met without threat. The future success of print-related marketing materials relies heavily on innovation, repurposing, and integration, learning to co-exist and collaborate (rather than oppose) with its digital counterparts to establish an appealing experience toward the consumers it wishes to address.

INTRODUCTION

With the rising digital revolution, it is evident that many consumers are becoming more inclined to believe that a non-physical approach is more attractive, convenient, and sustainable besides its traditional print counterpart (Saura et al., 2020). Many resources and materials available in print are being integrated onto digital platforms, and the question of whether or not the physical print medium is being cannibalized for flashier, modern methods is apparent. Although there is still an attraction toward printed materials and publications in certain areas, there are an overwhelming number of people: gender, nationality, age, education, and income aside, that have a preference toward digital platforms and media (Cherian, 2015). In order to meet the newfound and inclining demand, many businesses are learning to relocate their services and marketing efforts online to stay relevant with their consumer-base (Saura et al., 2020).

However, there are various reasons to argue that print cannot be completely abolished due to its fundamental standing, effectiveness, and its accompanying benefits. The print industry works relentlessly to ensure that the physical medium continues to innovate itself to work cohesively with technological expectation. Whether it be updating print technology to allow for more practical uses directed by digital instruction or weaving printed materials into integrative digital marketing campaigns, innovation seeks to cover displacement without waging competition against either medium. According to Print Industries of America (2019), the demand for printed materials is evidently inclining, stating that the overall wave of negative effects of digital displacement has ultimately passed. Despite this, the report reminds that specialization, diversification, and evolution of printed services and materials sway the future of the print industry amongst prolonging threats (Print Industries of America, 2019).

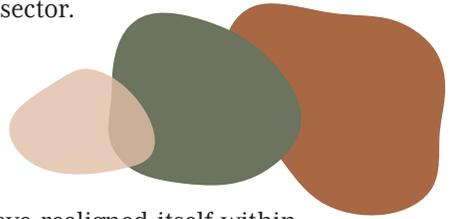
This study will suggest that print marketing materials are not a dying medium alongside the inclining digital age, and the medium never truly will die as long as innovators continue to advance its delivery to suit current, timely needs. There are areas in which digital marketing methods outperform that of print-related efforts, but it

is with utilizing each medium to its fullest potential in each unique circumstance where success can be determined.

LITERATURE REVIEW

The following will detail an examination of the literature in three key areas: consumer trends from a print perspective, consumer trends from a digital perspective, and the current status of print and digital marketing. The examination of these authors will reveal that print is not a dying medium, and is evolving to coincide amongst digital progression within the marketing sector.

Consumer Trends from a Print Perspective



Consumer behaviour has appeared to have realigned itself within the past two decades alongside technological developments such as the normalized usage of online sources as well as a higher concentration of accessible devices. In order to stay relevant with the changing environment, many businesses have sought to allocate their print-based resources toward these growing electronic channels (Saura et. al, 2020). Although the true measure of quality is difficult to determine between print and electronic mediums, limitless exposure provided by the populated online platforms were both attractive to existing and new businesses (Saura et. al, 2020). In fact, developing an online presence was practically a necessity, as consumers mitigated more of their time toward their devices (Saura et. al, 2020).

Relative to these observations, Kucuk (2011) details the evolving marketing mix (4 P's: Product, Price, Promotion, Place) for the directional shift from traditional print marketing to e-marketing channels. Most notably, Kucuk (2011) is firm in expressing consumer's developing expectations as they stray away from traditional platforms: consumers are now actively seeking rapid, thorough, and transparent information on-demand, more control in the area of personalization, convenience, and connectivity. Kucuk

(2011) continues to state that “Traditional media advertisements have started to lose blood to many new digital communication tools such as social networking, blogging and viral videos”, insinuating that it has become more difficult to capture a consumer’s attention by traditional means.

Industry reports show, however, that this observation may not be fully plausible given recent deductions of consumer preference.

The print industry is still prosperous, in accordance with the Printing Industries of America’s (PIA) *2019 State of the Industry Report* (Print Industries of America, 2019). Supported by trend analysis, PIA reveals that the print market has actually increased over the past few years, and that the digital displacement of printed media is waning behind (Print Industries of America, 2019). In addition, several key areas of microfocus are identified in which the print industry is currently thriving and are within high demand amongst consumers: labels, point-of-purchase displays, specialty printing direct mail, web-to-print, and packaging manufacturing (Print Industries of America, 2019); therefore exemplifying that there is still market potential for paper and printed material. In contrast to the area of packaging, which consistently appears to be unhindered by digital replacements due to the necessity of delivering physical goods to a consumer, physical marketing efforts which have been expected to be cannibalized by digital alternatives continue to be heavily requested (Print Industries of America, 2019).

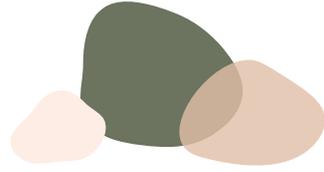
Two Sides (2020) agrees with PIA’s notion, arguing that according to global surveys and conducted research, consumers still very much value print over digital mediums. Overall, results show that there is a higher margin of informational retention from print mediums than digital, and that consumers find that consuming details on printed materials is much more enjoyable than that of its digital counterpart (Two Sides, 2020). Two Sides (2020) also strongly expresses that the digital medium is not so widely accessible as initially perceived, as there is still a heavy reliance on print materials from vulnerable members of the community: the elderly, the disabled, low-income households and those who live in more remote areas with limited access. To say that print has become unnecessary and obsolete would be irresponsible.

Despite the positive forecasting, PIA does underline some concerns for the near future of the print industry, citing a particular initiative to “go paperless” that is spreading from business to business (Print Industries of America, 2019). An article by Professor Kishor M. Dhumne (2017) supports this claim, expressing that literacy in print-related mediums are slowly decreasing, and that a paperless society is more plausible as the digital-literate youth age and enter the workforce. Dhumne (2017) criticizes the “holier-than-thou” attitude companies are conveying toward their audiences when offering a paperless substitution: claiming that the movement has less to do with actual sustainable goals, and more so along the lines of self-satisfaction. This area of self-satisfaction can be present in both businesses, and the consumers they wish to convince. As there is understandable unrest in relation to the Earth’s environmental standing, it is evident that consumers are on a higher alert when seeking actions to play a part in longstanding sustainability – that of which includes opting out of paper copy and materials in different circumstances.

“Opting out” itself has become a cause for concern, both for PIA and Two Sides. As aforementioned, the “paperless” initiative can heavily affect those consumers who rely on printed materials for important mailings and documents: this is especially the case in relation to the idea that “opting out” of paper is oftentimes free of charge, and “opting in” is oftentimes met with a required fee (Print Industries of America, 2019). As a result, consumers are currently being actively discouraged to require printed materials to the extent that they will more or less receive a consequence if they seek to “opt in”. *Keep Me Posted* (KMP) is a campaign overseen by Two Sides that aims to protect consumers and their choice between digital and print materials without any established consequence: Tony Curcio (2018a) details a survey result in his article that 90% of American respondents agree that consumers should have the right to choose which medium they should receive communications from. In relation to these efforts and the presence of these vulnerable demographics, PIA remains hopeful that no heavy-weighting paperless initiative will be forcefully implemented (Print Industries of America, 2019). The perceived environmental intention behind the paperless movement and the push for consumers to relocate completely online has potential in influencing the consumer’s

perception on future print-related efforts and materials negatively despite the current inclining trend of the print industry.

Consumer Trends from a Digital Perspective



An anonymous author wrote an article for the industry publication PrintAction, questioning the validity of the claim and belief that print will never truly disappear (“drupa Spotlight”, 2012). The author goes on to state the undeniable future that, although this would be technically true, there is certainty in the assumption that digital counterparts will displace major portions and channels that print would typically thrive upon (“drupa Spotlight”, 2012). The increased usage of web communications such as SMS, social media, e-mails, tweets, and webpages by consumers is cited (“drupa Spotlight”, 2012).

In relation, Liudmila A. Guzikova’s (2019) *How Printing Industry Meets Technological and Financial Challenges*, agrees with this assumption, claiming that the current biggest threat to the printing industry lies in the technological advances of modern society. According to Guzikova (2019), despite the print industry having fundamentalized deep economic roots to support itself, the expanding digital user base is becoming more accustomed to on-demand, accessible and efficient information that is provided to them by technological means, and less from the physical medium. As a result, it would appear that digital platforms have a clear advantage over physical materials in terms of advertising and marketing outreach (Guzikova, 2019). This is also in the case for existing publications, whereas many physical newspapers and magazines have been relocated online to stay aligned with the growing consumer preference, outlined by Jacob Cherian (2014) within *Emergence of Digital Publishing – A Great Challenge to The Print Publications*. On par with the declining opportunities to provide print material advertising within these publications, many marketing efforts have found an effective space to be implemented on a digital platform instead.

The following will detail three effective digital marketing strategies that have been consistently utilized within the past decade:

Marketing Automation is the use of marketing tools in order to automate and perform a plethora of different marketing tasks: it is a combination of effective tools, consumer fragmentation and network to provide an overall efficient and timely marketing campaign (Biegel, 2009). In *Marketing automation: Lessons learnt so far ...* author Claire Wood (2015) describes the current status and effectiveness of marketing automation within virtual spaces. Wood (2015) describes the efficiency of marketing automation within a platform that is explosive in activity and interaction, taking note that the timeliness of the tool is unparalleled to even the most efficient of human intervention. The landsliding viewership of mobile and video channels is particularly highlighted within this article – the inclining trend used to support the more common usage of marketing automation tools in order to meet the expanded consumer audience.

Targeted Marketing is the effort to personalize marketing material toward consumers on a digital platform (Bleier and Eisenbeiss, 2015). This is typically achieved through the artificial intelligence tracking of user preference via the content they consume (whether it be web pages that are frequented or purchasing decisions that are made) (Bleier and Eisenbeiss, 2015). Due to the condensed, competitive market, personalization has become imperative in trying to signal a user's attention: according to Bleier and Eisenbeiss (2015), many users would opt to actively avoid a company's online advertising efforts. This process is fundamentally automated, and helps to build a better relationship between brand and user without the human integrated effort to connect with the observer on a one-on-one basis (Bleier and Eisenbeiss, 2015). Although doubtlessly effective and efficient, it is important to note that users find personalized marketing significantly more intrusive than non-personalized marketing, and therefore a negative correlation is entirely possible to be present within this marketing tool (Bleier & Eisenbeiss, 2015).

Social Media is the marketing efforts provided by companies on social media platforms such as Facebook, Twitter, Instagram, and

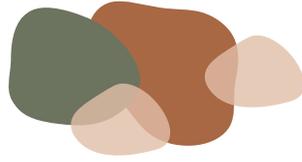
most recently, Tiktok (Vinerean, 2017). Noted by Simona Vinerean (2017) in *Importance of Strategic Social Media Marketing*, social media offers a clean platform in which companies and businesses are able to interact with their key audiences on a personal level. Each different platform resonates differently with consumers, and it is in a business's best interest to examine and determine how effectively a message can be conveyed through each social media channel (Vinerean, 2017). Vinerean (2017) cites the potential of personalized marketing on social media platforms, calling attention to the result in which consumers are less likely to be uncomfortable with brand outreach on social media websites.

This therefore strengthens brand relationships and allows consumers to become more susceptible to making a higher amount of impulse purchases and establishing a stronger degree of brand loyalty (Vinerean, 2017). The importance of word-of-mouth within these platforms are also supported, the wide reach of these platforms alongside a seemingly endless amount of users can contribute to the spread of any marketing campaign (Vinerean, 2017).

Apart from the effectiveness of the aforementioned digital marketing strategies, an article titled *New study carefully explores the challenges and current concepts in measuring the success of online advertising*, written by Curcio (2019), questions the true observational validity of digital advertising efforts. A main question that is brought up is as follows: "Would a purchase still be made whether a consumer sees an online advertisement or not?" (Curcio, 2019). Curcio (2019) identifies a study by research from Northwestern University and Facebook which seeks to determine the effectiveness of digital advertising observational measurement. Most notably, the study underlines the assumption that although measures can take into account aspects of the consumer such as demographic (in terms of age, gender, location, and shopping preferences) and the devices in which they access online resources from, there is still a disconnect in certain areas of observation – for instance, a consumer's previous affiliation to a brand is difficult to assess through individual-level data (Curcio, 2019). Therefore, it can be difficult to determine if digital marketing is a particularly clever or fully-effective substitute from traditional print marketing efforts, which also tends to

struggle when trying to observe these unexposed areas of consumer behaviour and retention (Curcio, 2019).

Current Status of Print and Digital Marketing



As consumers exist in a physical world, touch is a fundamental necessity that still requires to be addressed. For instance, packaging can never be replaced by a digital counterpart: consumers require real, physical goods to live their day to day lives, and those physical goods are delivered in the form of packaging. A similar claim is more challenging to make on account of printed materials within marketing sectors, where digital media has taken the lead as a primary channel of advertising.

Despite this, PIA's report is confident in the budding future of the print industry's mature recovery, acknowledging the continuous effort of North American print businesses to innovate and expand their services to fit technological developments (Print Industries of America, 2019). There are several recent advancements in print material that indicate the push to work alongside its digital counterparts in order to create an effective integrative marketing experience:

Personalization / Direct Mail. In a study conducted by *Temple University*, results show that direct mailer advertisements retained consumer attention far longer than digital advertisements, despite the digital medium's ability to gain a faster response amongst respondents (Curcio, 2016). *Keypoint Intelligence-InfoTrends* conducted another study on the topic of direct mail which explored the perception of direct mail in accordance with millennial consumers (Curcio, 2018b). Contrary to the popular belief that millennials are much more inclined to turn toward digital mediums, 76% of respondents were found to look over most direct mail that they are given – of this margin, 36% of respondents expressed that being given direct mail is a reflection on a company's devotion to retain the consumer's attention (Curcio, 2018b). In an article written by

Diana Varma (2016), *Big data, big possibilities in the printing industry*, a heavy emphasis is placed upon the utilization of personalization in direct mail to connect on a closer level with one's consumers. There is hope that data gained from online mediums can be implemented creatively into the personalization of print material in order to support this aspect of the print industry alongside an increasingly digital world (Varma, 2016).

Web-To-Print is a rising tool within the print industry that assists in streamlining the printing process directly from the consumer to the press (Chagnon, 2008). According to an industry article from Anna Chagnon (2008), *Web-to-print in the consumer market*, creating web pages to promote web-to-print services motivates the consumer to purchase print materials amongst their own independence: as personalization becomes key in many aspects of demand, the consumer is able to control materials creatively to their own discretion. Many printing companies that offer web-to-print services provide a variety of products for the consumer to choose from business cards to advertisements and signage (Chagnon, 2008).

Augmented Reality adds value to print materials by offering digital interaction (Mannone, 2015). Augmented Reality (AR) technology is typically initiated from an indicator watermark on a printed material or signage – although the simplest implementation of AR involves prompting video, recent innovations have even leaned toward interactive, three-dimensional graphics and spaces (Mannone, 2015). AR technology offers an integrative marketing approach through its equal reliance on both print and digital mediums, therefore reaping the benefits from each platform an overall effective and holistic experience for targeted consumers. In a report detailed by Thomas Olsson, Else Lagerstam, Tuula Kärkkäinen and Kaisa Väänänen-Vainio-Mattila (2013), augmented reality seeks to enrich a user's experience, not exclusively in usability, but emotionally to improve the subject's relationship with a directed brand. The positive association of the analog-digital experience is built from the user's ability to apply real-time action, skills and physical influences toward an electronic medium that offers instant rewards (literally or in visual and aural experience) in exchange

(Olsson et al., 2013). One such instance of effective implementation of augmented reality is the 2016 *Play a Coke* application campaign delivered by a collaboration from *Coca-Cola Canada* and music-streaming application, Spotify, toward a Canadian audience (Canadian packaging staff, 2017). Within the campaign, consumers would be able to download a special AR application on their mobile devices (Powell, 2016). These specially-marked Coca-Cola bottles, whereas the iconic logo was substituted for a “play” button symbol, triggered an augmented virtual experience when the face of the package was scanned (Powell, 2016). Once activated, the application’s AR camera turned any consumers’ Coca-Cola bottle into a musical device, allowing the user to play, pause, and switch between twenty assigned Spotify music tracks that were unique to each bottle (Powell, 2016). This award-winning campaign was rerun a year after its successful debut, linking areas of marketing, packaging, music, print and digital experiences together (Canadian packaging staff, 2017).

Quick Response (QR) Codes are an accessible form of barcode that can be identified using a consumer’s camera-phone (Baik, 2012). By scanning a provided QR code, information may be distributed from an analog source toward a digital display (Baik, 2012). These barcodes are commonly used on a wide variety of advertisements, including flyers, newspapers, cars and product packaging, motivating curious observers to personally approach and attain the information hidden behind the graphic prompt (Jara et al., 2014). Businesses have also utilized QR codes to offer additional services and deals to reward customers for their efforts to interact with the given physical advertisement (Jara et al., 2014). Recently to the writing of this feature, the usage of QR codes have gained a resurgence in popularity to promote low-contact and safety measures put into place by the 2020 worldwide pandemic, COVID-19 (Walker & Gibson, 2020). A number of businesses have found convenience in utilizing these QR codes to collect customer information in order to adhere to contract tracing policies (Walker & Gibson, 2020). Upon scanning the QR code with a smartphone, a URL is prompted, whereas the affiliated website requests for personal information to be entered on behalf of the customer (Walker & Gibson, 2020). In a similar fashion, restaurants have also found value in implementing QR codes in the

form of virtual menus in response to the COVID-19 pandemic – by offering customers a scannable code, digital menus can be instantly sent to their devices, therefore limiting cross-contamination that may be present when exchanging a physical menu between tables (Entrepreneur Staff, 2020). Not only is this convenient for restaurants due to the instant interchangeability and information distribution the technology provides, but promoting the use of QR code substitutes for menus and similar areas are reassuring customers to visit food businesses again during the uncertainty brought about by the COVID-19 pandemic (Entrepreneur Staff, 2020).

METHODOLOGY

It is important to note that the conclusion or answer toward the longevity of printed marketing materials and its future integration with digital mediums cannot be determined through quantitative methods alone. A large portion of determining printed materials' involvement in future marketing campaign efforts does not solely rely on consumer analysis and calculated projection. The final conclusions are heavily weighted based on the involvement of those currently within the graphic communications industry, their expectations and their strive for innovation. The research that is to be gathered must be timely and relevant.

Participants

The eight participants selected to provide their insights toward the research of this paper are fundamentally derived from industry professionals that have seen 4-15+ years of experience within packaging, educational, print, media, communications and marketing sectors. These professionals occupy supervisor roles in their areas of work, including marketing manager, production coordinator, digital marketing and communications coordinator, director of marketing, business president and professor positions. Tasks that are commonly overseen by these professionals include managing print production, supervising areas of marketing, media, PR and communication, and supervising a wide portfolio of products within digital, print, web and creative-based mediums.

Conducted Methods

Method 1: General Questionnaire

Qualitative data is to be gathered through the use of questionnaires which include three statements to be answered via a Likert scale, and two short-answer qualitative questions. Five respondents were selected based on position and time involved within the print and marketing industries.

The study aimed to focus primarily on those who practice supervisor roles within print and marketing companies, or have had prior experiences close to the aforementioned industries. The questionnaire requested input toward the following questions consistently throughout all involved respondents:

Housekeeping Questions — for organization and determining experience and position within the respondents' respective fields:

1. What is your name?
2. What is your position within your organization? What tasks do you typically oversee?
3. How long have you been working in this area?

Likert Questions are a linear scale ranging from one-to-five options, where the lower value represented a “Strongly Disagree” opinion, and the higher value represented a “Strongly Agree” opinion. The scale optimized questions that did not require short-answer responses and indicated the majority for each option. Due to the small number of respondents, numerical percentages or averages were not necessary. The questionnaire asked respondents to choose a number on the given scale to align their affirmation or negation toward the following statements. As seen below, examples of questions included the use of a Likert scale:

1. Based on effectiveness, digital efforts are currently advantaged against the print medium.
2. Print is a dying medium.
3. Print and digital mediums can work together cohesively to create a more effective experience.



Example of the Likert scale that is utilized for the above statements.

Qualitative Questions – to address personal perception on the trends for printed and digital marketing/materials within the graphic communications industry. These two short-answer questions are viewed from a gradual growth standpoint (year-by-year) and a sudden, dramatic change standpoint (COVID-19):

1. What changes have you noticed with respect to print and digital marketing materials since you've started working in this industry?
2. Due to COVID-19, have you noticed a change in demand for print and digital marketing?

It is important to note that respondents were also encouraged to include additional thoughts, comments or insights if the respondents wished to expand on certain areas or topics that the questionnaire did not address.

Respondents were given the option to answer the five statements and/or questions at their own leisure, so that they could focus on answers that they felt were most relevant to themselves and their position – however, all five respondents answered every question in full. The five statements and questions were tailored to address one's own personal perceptions and insights with the changing consumer demands affecting the directed industries and tying those perceptions with expectations for the future of print and digital media. Recalling the amount of time that a respondent has been involved within their position or within the industry is especially important for the questionnaire, as the years of experience they hold may influence their answers a considerable amount. For instance, a respondent would have more insight to the demand and product changes within a wider time interval, compared to a respondent who has seen less change with a smaller time interval.

Method 2: Personal Interview

Three additional respondents were selected to discuss further insights toward the topic with personalized questions. In contrast to the general questionnaire, the three respondents were asked to provide their account in the form of short answers rather than participate in Likert scale-type questions. These questions were curated to take into account the respondents' past experiences within their respective fields, though fundamentally addressed the following areas:

1. What changes have you noticed with respect to print and digital materials since you've been involved in this industry as the usage of electronic devices is seemingly increasing year-by-year?
2. Do you believe that one medium (digital or print) has an advantage over the other? Why do you think this is?
3. Have you seen any opportunities/recent innovations in which print materials can work side-by-side with digital approaches? Do you believe that consumers would be attracted to the mixed-media approach?

The interviews were conducted virtually, ranging from text-based communication to in-person video calls. Similar to that of the general questionnaire, housekeeping questions were requested at the start of each interview in order to retrieve information pertaining to the respondents' past experience and positions within the industry.

Analysis Approach

The respondents' insight to the short-answer qualitative questions were personally read, sorted, analyzed, connected and contrasted by the author, utilizing and connecting their personal ideas, expectations, and opinions. In turn, the responses provided by the Likert scale statements were added and compared to one another in order to determine the generalized opinion for each given option. Both portions were further weighed and investigated to create a conclusion across all respondents, providing an insightful overview of the future motivations that are directed toward the graphic communications and marketing industries.

RESULTS

This section will detail findings involved with the gathered research through insights provided remotely by administered general questionnaires and personal interviews with the selected industry professionals. Because these professionals have 4-15+ years of experience in supervising different areas of graphic communications such as print production, marketing, media, PR, communication and education, the questions offered are relatively consistent from one survey to the next. The consistency of requesting information is utilized to ensure that each professional is able to apply their valuable and unique work experiences toward a common consensus. In turn, the overall consensus amongst the professional participants will be determined based on their provided insights, followed by in-depth analysis of results and given reasoning behind the established conclusions.

Findings

Amongst the five respondents of the general questionnaire, respondents seemed more inclined to believe that, within the marketing sector, print mediums are currently disadvantaged against digital efforts in terms of effectiveness.

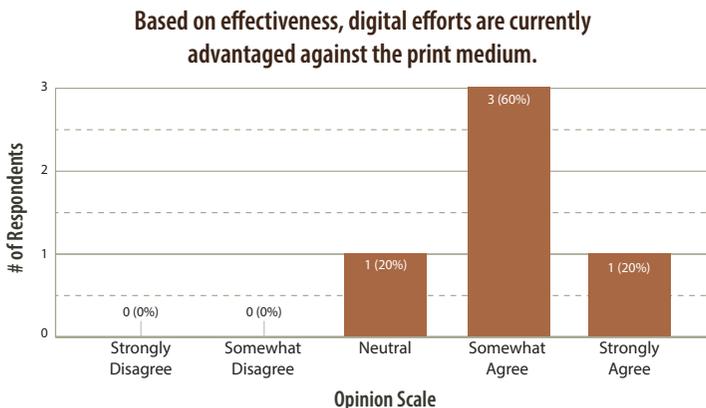


Figure 1. *Based on effectiveness, digital efforts are currently advantaged against the print medium*

Taking into account the results found in Figure 1, four respondents lean toward agreeing with the accompanying statement, while one remained neutral. According to additional insights given by the respondents, the digital medium's benefits of efficiency, relevancy, customization and widening audience are enough to drive companies' marketing efforts to lean toward the online platform: one respondent affirming that the digital medium is overall more accessible (Professor A, personal communication, November 18, 2020). Another respondent, a director of marketing, cites the success of utilizing strategic search engine optimization within their own company's marketing efforts, claiming that "businesses in our markets looking for our products find us.", which in turn draws in a wider margin of potential customers (Director of Marketing, personal communication, November 12, 2020).

Most importantly, multiple respondents' key reasoning to support digital medium's effectiveness in contrast to print was its ability to provide immediate, data-driven feedback and analysis (Marketing Manager, personal communication, November 25, 2020). "Print advertising lacks metrics making it difficult to validate its effectiveness," explains one respondent, a marketing manager, within the general questionnaire, "marketers want to see stats pertaining to their marketing spend which digital, although not perfect, can provide." (Marketing Manager, personal communication, November 25, 2020) In lieu of the support of the digital medium's effectiveness over that of print efforts, the responses to the following statement came as a surprise:

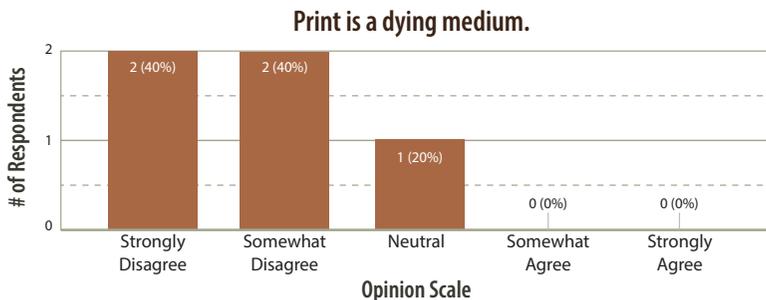


Figure 2. *Print is a dying medium*

With most responses leaning to disagree with the statement that print itself was a dying medium (Figure 2), the opinions seemed to contradict the benefits in which digital replacements had been praised for. In addition, multiple respondents agreed with the statement that many current marketing efforts shifted toward online platforms, to the extent that in some cases, clients were discouraged from creating print campaigns in exchange for digital methods (Production Coordinator, personal communication, November 25, 2020).

All respondents were consistent in claiming that despite traditional marketing campaign's digital relocation, there would always be a certain facet for print to exist in. One respondent, a production coordinator, within the general questionnaire states that print and digital materials bring their own personal value to marketing campaigns, and it is the role of the marketing team to determine which medium would best suit a specific target or need (Production Coordinator, personal communication, November 25, 2020). Two other respondents, within the general questionnaire agree, citing future expectations for print marketing materials in different forms than that of traditional marketing means: although not the driving force for building consumer awareness, print marketing will continue to be effective in areas such as packaging and in-store displays, with a higher degree of specialization (Director of Marketing and Communications & Marketing Manager, personal communication, November 25, 2020).

It is important to note print's current stance alongside its function of packaging, as it is commonly believed that packaging's role within the print sector as a whole is the least likely to diminish on account of the necessity of receiving physical goods. Within a personalized interview, one respondent, a professor, recalls the importance of packaging in accordance to marketing efforts: "...Whenever people speak to the package, they generally interconnect that with the brand, because it's the first piece that the consumer actually engages with before they engage with the product...", therefore solidifying the idea that packaging and marketing do not entirely operate autonomously from one another (Professor B, personal communication, November 23, 2020). The respondent, who also

specializes in packaging and marketing, continues to express that digital marketing nor physical print should disregard the other (Professor B, personal communication, November 23, 2020). In the sense of packaging, each medium is wholly reliant on each other's efforts in order to fully communicate a brand's outreach toward the consumer (Professor B, personal communication, November 23, 2020).

However, in regards to the 2020 worldwide pandemic, COVID-19, respondents have mentioned there being a temporary allocation for most printed marketing materials to be switched to digital methods in accordance with physical distancing and stay-at-home expectations that are currently practiced by the general public. Many forms of face-to-face or physical communication efforts have migrated to online platforms, while companies are concerned that the products that they create may further spread the virus and push the necessity of staying as low-contact as possible (Digital Marketing & Communications Coordinator & Director of Marketing, personal communication, November 25, 2020). As mentioned previously, packaging does continue to be a necessity while home deliveries have increased exponentially amongst the pandemic, allowing marketing to prevail on the face of any consumer product (Professor B, personal communication, November 23, 2020). It would seem that the majority of the outstanding physical marketing campaigns have been diverted or placed on standby for the unforeseeable future (Production Coordinator, personal communication, November 25, 2020). There does remain a certain degree of expectation that printed marketing materials will bounce back to an extent (Digital Marketing & Communications Coordinator, personal communication, November 25, 2020).

The final statement provided on the general questionnaire (Figure 3) provided the most unanimous conclusion across all participants, whereas all but one respondent strongly agreed with the statement that expresses that the print and digital mediums can work together cohesively to create an overall more effective experience.

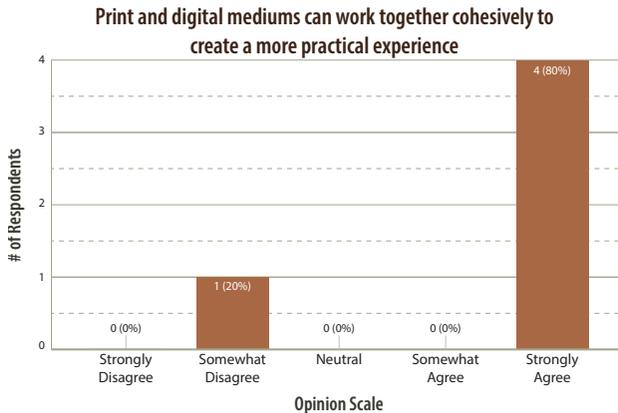


Figure 3. *Print and digital mediums can work together cohesively to create a more effective experience.*

While four-out-of-five respondents seem positive that digital and print mediums had ample opportunity to exist and cooperate alongside each other, the lone standing respondent that chose to lean more toward a disagreement mentions that in their years of experience, most of the investments made on account of marketing have been skewed toward digital platforms with the exception of in-store retail materials (such as displays and shelf-talkers) (Marketing Manager, personal communication, November 25, 2020). To this regard, it is evident that marketing campaigns that exist wholly on digital platforms have high potential on being effective as a standalone, and that in turn, the involvement of print is not entirely necessary to determine utmost success.

On the other hand, respondents that provided insights from the personal interviews also agreed with the idea that the two mediums are able to work together simultaneously: the innovation of incorporating the physical touch of print materials with the interactivity of digital platforms has proven to be a particularly effective marketing direction (Director of Marketing, Professor A & Professor B, personal communication, 2020). “...You’re seeing the ability of printed materials to act as the jumping off point for a unique digital consumer experience...” says one respondent in relation to the potential impact that using the two mediums cohesively can deliver (Director of Marketing, personal communication, November 12, 2020).

Different applications of recent or budding implementations were offered as examples by the respondents, including augmented reality triggers on both printed flyers and packaging, as well as scannable targets (such as QR codes) that can lead to directed webpages (Director of Marketing, Professor A & Professor B, personal communication, 2020). In accordance with the topic, another respondent, another professor, recalls a quote: “New technologies do not obviate the old.” — calling into attention that new technologies simply create a greater diversity of approaches (Professor A, personal communication, November 18, 2020).

Conclusions

It is, without a doubt, conclusive among respondents that the digital medium holds a number of benefits that allow its marketing campaigns to outperform those that use print marketing materials. In terms of efficiency, outreach and ability to provide data-driven feedback, digital marketing efforts would prove more effective. However, there does exist a certain expectation that print houses its own benefits and is necessary in its own rights. To a certain extent, the physical medium in marketing cannot be wholly replaced: it continues to exist in packaging and in-store retail marketing efforts such as displays and shelf-talkers, though a substantial amount of its original, traditional forms have already been diverted toward online platforms.

With the sudden turn of consumer demand and expectations that followed with the rise of the worldwide pandemic, COVID-19, it has become glaringly clear that many efforts can be migrated online and highly effective without a printed material to ground digital campaigns. Despite this, there still remains hope that print’s involvement with marketing will turn around. According to one respondent, the president of a small business, it is possible that the saturization of digital content may result in an overload, and in turn, attract consumers back toward the physical medium (Small Business President, personal communication, November 25, 2020). Opportunities arise for innovation within this possibility, as promising investments in hybrid campaigns

between digital and print mediums are proving to become effective in providing consumers a unique experience that satisfies both physical and modern necessities (Director of Marketing, personal communication, November 12, 2020). What is key in the success of any marketing campaign, be it printed, digital, or hybrid-based, is identifying the correct approach toward an intended targeted audience and utilizing the required resources appropriately and effectively. It is important to take into account how each medium can rely on one another and enrich each other's experiences.

DISCUSSION

Evidenced from the literature, it would seem that the print medium itself is not currently (as of the year of this writing, 2020) seeing a decline in consumer interest; this is heavily determined by reports supported by PIA (2019) and Two Sides (2020), which confirm that the demand and interest of the printed products is steadily increasing. The given merit is not given without recognizing the displacement that has occurred previously alongside the initial advancement of substitutional digital media (Print Industries of America, 2019). As online mediums promised accessibility and convenience, there was a wide margin of consumers that migrated their print-related activities toward digital platforms, seeing the decline of traditional print publications such as magazines, books and newspapers as businesses adapted with their targeted audiences (Professor A, personal communication, November 18, 2020). For marketing, this decreased the opportunity for providing traditional printed materials within the now-transitioned publications. In addition, the inclining widespread usage and word-of-mouth ability that social media brought about opened the opportunity for traditional marketing efforts to be relocated as well: newfound behaviours developed by digital spaces demanded more attention from consumers (Guzikova, 2019) that traditional marketing struggled to take a proper hold of (Kucuk, 2011).

The flashiness and trend of digital mediums were not the only factor that threatened the print medium. Digital marketing efforts themselves held true to its own values, providing unique and statistically effective benefits that would be difficult to replicate using traditional marketing and printed materials. The review of literature identified three key areas of digital marketing methodologies that have seen positive results in their implementations: marketing automation, targeted marketing, and social media marketing. In summary, common strengths that are prominent in each of these strategies include the ability to customize, personalize, and build positive relationships between brand and consumer. With digital marketing, companies are able to tailor their products and services toward consumers on a personal level, and allow consumers to feel as if they are interacting with the brand authentically and autonomously (Professor A, personal communication, November 18, 2020). Through the conducted interviews and questionnaires with experienced industry professionals, several additional benefits of digital marketing were highlighted. Search engine optimization, a form of targeted marketing, was cited by a director of marketing to be especially effective when wanting to forward their products and services toward an identified target audience (Director of Marketing, personal communication, November 12, 2020). However, the deal breaker between print and digital marketing options communicated across most respondents, was digital marketing's ability to provide real-time results and information on engagement and consumer data, allowing for advertisements' effectiveness to be instantly determined. An article by Curcio (2019) suggests that measuring success of marketing efforts is not as reliable as one would perceive. One respondent, a marketing manager, agrees to Curcio's sentiment to an extent, admitting that metrics provided by these means are not perfect (Marketing Manager, personal communication, November 25, 2020). Despite this, the respondent also expresses that the determined statistical deductions provide far more benefits than print material's low potential for providing feedback, which therefore outweighs the anxiety surrounding reliability (Marketing Manager, personal communication, November 25, 2020). Furthermore, there are businesses that are adapting policies and establishing "opting in" for paper fees to discourage their consumers from receiving

and requesting printed materials in reference to a sustainable “go paperless” effort (Print Industries of America, 2019).

Identifying the complications that are reiterated by both literary sources and research results reveal that the print marketing has faced many challenges to stay afloat, though these challenges have not been unprovoked. There is distinct meaning and reasoning behind the idea that consumers have begun to switch their interest toward digital mediums for a time. Not only was newfound technology itself attractive and suited the developing needs of its audience, but companies themselves have found benefits and effectiveness in relocating and investing their efforts into digital purposes. Especially with research respondents’ thoughts regarding their companies’ current operations amongst the weighing COVID-19 pandemic, it is heavily implied that it is entirely possible that the involvement of printed marketing materials is not necessary in ensuring the high success of any modern marketing campaign.

There are implications that printed marketing materials cannot be wholeheartedly replaced. Described by PIA (2019), discouraging the distribution of printed materials demeans vulnerable individuals that depend on paper forms of important documents and products, in lieu of issues involving geographic location, disability, income and age. In addition, printed marketing materials also continue to be utilized effectively in different forms than flyers and posters – in-store displays and shelf-markers are still especially important when attracting a consumer and connecting them with a specific brand or product, despite not being the main driver in promoting customer attention (Director of Marketing and Communications, personal communication, November 25, 2020). The same can also be implied on the topic of printed packaging products: although not typically associated directly with marketing, packaging design has much involvement with attracting consumers at a face-front, intimate level (Professor B, personal communication, November 23, 2020). Packaging itself has been implied to be one of the most steadily living printed materials, its demand seemingly never diminishing on account for the constant consumer demand of physical products (Professor B, personal communication, November 23, 2020).

Therefore, it can be established that despite the cannibalization print has experienced in the wake of the digital revolution, print cannot completely die. There will always be alternative uses for print to excel in beyond that of the digital medium, and will continue to exist in these unconventional forms. It is important to consider that despite the idea that print materials are not occupying the same spaces it had monopolized in the past, recent efforts to keep the medium alive should not be overlooked, as many are still extremely effective within their given context. In addition, PIA (2019) also expresses that new, innovative purposes created for print are also contributing toward the medium's increasing market demand.

Within the personal interviews and general questionnaires, most respondents agreed that there was potential in developing hybrid approaches to marketing campaigns, seeking to utilize benefits brought about by both print and digital mediums. To reinforce these claims, the review of literature identified four methods of print-digital material marketing forms: personalization / direct mail, web-to-print services, AR technology and QR code scanning. These features seek to increase consumer engagement and user experience with a brand or product on both analog and digital fronts. On the front of AR technology and QR code scanning, two examples of innovative implementations of print-digital approaches were given: the Play a Coke campaign and the increased utilization of QR code scanning amidst the 2020 worldwide pandemic, COVID-19. Both examples suggest that in bringing these two mediums together, marketing campaigns can see opportunity in increasing its effectiveness. In a personal interview, one respondent expressed the importance of recognizing how digital and print media are closely aligned with each other: rather than being at odds, there is a certain aspect of reliability from one medium to the next (Professor B, personal communication, November 23, 2020). Another respondent agrees, reinforcing the idea that the rising development of digital technology should not only be seen as a threat to the printed medium, but as an opportunity to reinvent oneself and diversify future approaches (Professor A, personal communication, November 18, 2020).

Although the notion of print and digital media being able to work substantially together was perceived, the idea that the overall support toward the benefits of digital marketing efforts over printed materials was unpredicted. Initially, it was assumed that through innovation, and advancement, print marketing materials held ample opportunity to stand side-by-side with most, if not all, digital efforts. This however, was not entirely the case. Through analyzing the literature and responses provided by the directed research, it became clear that there are a plethora of reasons as to why the digital medium stood superior to that of print. Therefore, a new conclusion was developed: because print itself as a medium could never truly die, then perhaps its own benefits could be identified and be used effectively to suit its appropriate needs. Rather than seeing the two mediums as two opposing sides, it could be beneficial to assume both print and digital efforts to be alternatives with its different strengths depending on each unique, individual circumstance and target audience. Integrative marketing approaches that rely on the use of both print and digital mediums seek to achieve a balance that maximizes both medium's benefits, recognizing the potential of an increasingly positive user experience.

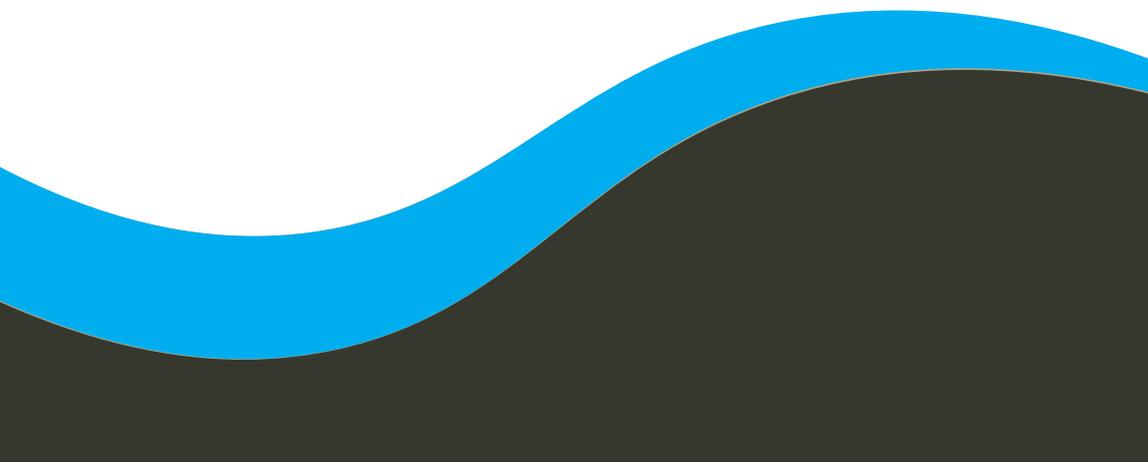
CONCLUSION

To determine a conclusion to the question of whether or not the print medium is dying, the answer would be a strained “no”. Despite concrete evidence that print materials for marketing purposes are still being developed and utilized, there are various aspects in which print should work to improve upon that its digital alternatives can fulfill. Through research provided by experienced industry professionals, respondents have identified that digital marketing strategies have become the preferred method in demanding consumer attention. The digital medium's benefits in reachability, accessibility, personalization, convenience, optimization and real-time data tracking prove to be incredibly strong assets that businesses continuously seek to use. In addition, the occurrences of dwindling consumer interest, discouragement of receiving printed materials on behalf of a business, and the sudden changes

that followed the COVID-19 pandemic threaten the prosperity of the printing industry. Innovation, however, keeps the demand for printed materials in marketing afloat.

The writing identified areas in which are proving effective for the innovative usage of printed materials to coincide with digital platforms; augmented reality and QR code scanning proving to be particularly advantageous in consumer engagement and effectiveness within their respective circumstances. As the digital medium carries its own range of capabilities, print similarly carries its own benefits as well. Both respondents and industry sources remain hopeful that integrative marketing approaches that seek to maximize the potential of both print and digital mediums will continue to be developed further and deliver successful campaigns.

Conclusively, print is not dying. It is the continuous efforts made by marketers and print figureheads in order to innovate the shifting medium that help print stand alongside its digital counterparts. Although print has evolved from what is traditionally expected to exist as, the print medium continues to find effective usage in areas most suitable for its implementation. At its core, print material and digital efforts do not have to exist to be at odds with one another. By recognizing each medium's benefits and utilizing them appropriately, whether as autonomous methodologies or as an integrated experience, the future demand of both print and digital marketing efforts will continue to incline.



REFERENCES

- Baik, S. (2012). Rethinking QR code: analog portal to digital world. *Multimedia Tools and Applications* , 58 (2), 427-434.
<https://doi.org.ezproxy.lib.ryerson.ca/10.1007/s11042-010-0686-9>
- Biegel, B. (2009). The current view and outlook for the future of marketing automation. *Journal of Direct, Data and Digital Marketing Practice* , 10(3), 201-213.
doi:<http://dx.doi.org.ezproxy.lib.ryerson.ca/10.1057dddmp.2008.37>
- Bleier, A., & Eisenbeiss, M. (2015). The Importance of Trust for Personalized Online Advertising. *Marketing Science* Forthcoming. 10.1287/mksc.2015.0930
- Canadian Packaging staff. (2017). Play A Coke app campaign returns in summer 2017 for Canadians. *Canadian Packaging* . <https://www.canadianpackaging.com/general/play-coke-app-campaign-returns-summer-2017-canadians-151305/>
- Chagnon, A. (2008). Web-to-print in the consumer market. *Graphic Arts*. <https://graphicartsmag.com/articles/2008/04/web-to-print-in-the-consumer-market/>
- Cherian, J. (2015). Emergence of Digital Publishing – A Great Challenge to The Print Publications. *Procedia Economics and Finance* , 23, 576-586. [https://doi.org/10.1016/S2212-5671\(15\)00361-5](https://doi.org/10.1016/S2212-5671(15)00361-5)
- Curcio, T. (2016). New study finds that direct mail has a greater effect on purchasing than digital ads. *Graphic Arts* .
<https://graphicartsmag.com/marketingsales/2016/08/new-studyfinds-direct-mail-greater-effect-purchasing-digital-ads/>
- Curcio, T. (2018a). Keep Me Posted launches campaign to protect consumers' right to choose paper or electronic communications. *Graphic Arts* .
<https://graphicartsmag.com/news/2018/12/keep-me-posted-launches-campaign-to-protect-consumers-right-to-choose-paper-or-electronic-communications/>
- Curcio, T. (2018b). New Keypoint Intelligence–InfoTrends study dispels myths about Millennials and direct mail. *Graphic Arts* .
<https://graphicartsmag.com/marketing-sales/2018/09/new-keypoint-intelligence-infotrends-study-dispels-myths-about-millennials-and-direct-mail/>

- Curcio, T. (2019). New study carefully explores the challenges and current concepts in measuring the success of online advertising. *Graphic Arts*.
<https://graphicartsmag.com/marketing-sales/2019/03/new-study-carefully-explores-the-challenges-and-current-concepts-in-measuring-the-success-of-online-advertising/>
- Dhumne, K. M. (2017). Paperless Society in Digital Era. *International Journal of Library and Information Studies* , 7 (4), 317-319.
http://www.ijlis.org/img/2017_Vol_7_Issue_4/317-319.pdf
- Drupa Spotlight: The Road to Digital Success. (2012). *PrintAction*.
<https://www.printaction.com/drupa-spotlight-the-road-to-digital-success-1306/>
- Entrepreneur Staff. (2020). How Dynamic QR Codes Became an Essential Tool For Every Business Out There. *Entrepreneur India*.
<https://www.entrepreneur.com/article/359569>
- Guzikova, L. (2019). How Printing Industry Meets Technological and Financial Challenges. *UBT International Conference* , 352. 10.33107/ubt-ic.2019.352
- Jara, A. J., Parra, M. C., & Skarmeta, A. F. (2014). Participative marketing: extending social media marketing through the identification and interaction capabilities from the Internet of things. *Personal and Ubiquitous Computing* , 18(4), 997-1011.
<https://doi-org.ezproxy.lib.ryerson.ca/10.1007/s00779-013-0714-7>
- Kucuk, S. U. (2011). Towards integrated e-marketing value creation process. *Journal of Direct, Data and Digital Marketing Practice*, 12(4), 345-363.
doi:<http://dx.doi.org.ezproxy.lib.ryerson.ca/10.1057/dddmp.2011.3>
- Mannone, S. (2015). Augmented Reality and the print opportunity. *Graphic Arts*.
<https://graphicartsmag.com/articles/2015/02/augmented-reality-print-opportunity/>
- Olsson, T., Lagerstam, E., Kärkkäinen, T., & Väänänen-Vainio-Mattila, K. (2013). Expected user experience of mobile augmented reality services: a user study in the context of shopping centres. *Personal and Ubiquitous Computing* , 17 (2), 287-304.
<https://doi-org.ezproxy.lib.ryerson.ca/10.1007/s00779-011-0494-x>

- Powell, C. (2016). COKE AND SPOTIFY DUET ON CANADA-SPECIFIC PROMOTION. Marketing.
<http://marketingmag.ca/brands/coke-and-spotify-duet-oncanadaspecificpromotion-174487/>
- Print Industries of America. (2019). 2019 State of The Industry Report. PRINTING United Alliance.
http://efiles.printing.org/eweb/docs/downloadable_products/2019-state-of-the-industry-report-final.pdf
- Saura, J. R., Reyes-Menendez, A., de Matos, N., Correia, M. B., & Palos-Sanchez, P. (2020). Consumer Behavior in the Digital Age. Journal of Spatial and Organizational Dynamics , 8 (3), 190-196.
<https://www.jsod-cieo.net/journal/index.php/jsod/article/view/242/188>
- Two Sides. (2020). Many consumers still value paper-based communication . Two Sides.
<https://www.twosides.info/consumer-choice/>
- Varma, D. (2016). Big data, big possibilities in the printing industry. Graphic Arts.
<https://graphicartsmag.com/articles/2016/03/big-data-big-possibilities-in-theprinting-industry/>
- Vinerean, S. (2017). Importance of Strategic Social Media Marketing. Expert Journal of Marketing , 5(1), 28-35.
<http://marketing.expertjournals.com/23446773-504/>
- Walker, A., & Gibson, B. (2020). QR codes skyrocket in popularity due to COVID-19. Here's the history behind the 2020 technology of choice. ABC News.
<https://www.abc.net.au/news/2020-12-02/history-of-qr-codes-as-popularity-skyrocketsdue-to-covid-19/12942318>
- Wood, C. (2015). Marketing automation: Lessons learnt so far. Journal of Direct, Data and Digital Marketing Practice , 16(4), 251-254.
doi:<http://dx.doi.org.ezproxy.lib.ryerson.ca/10.1057/dddmp.2015.31>

APPENDIX

1. General Questionnaire Statements and Questions

Statements (Likert Scale 1-5)

- Based on effectiveness, digital efforts are currently advantaged against the print medium.
- Print is a dying medium.
- Print and digital mediums can work together cohesively to create a more effective experience.

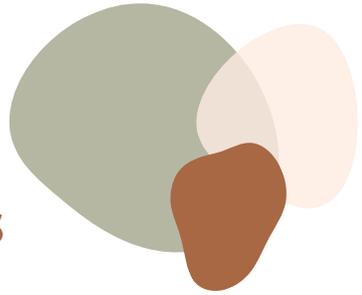
Questions

- What changes have you noticed with respect to print and digital marketing materials since you've started working in this industry?
- Due to COVID-19, have you noticed a change in demand for print and digital marketing?
- What changes have you noticed?

2. Personal Interview Questions

Interview A

- What changes have you noticed with respect to print and digital materials since you've been involved in this industry?
- What aspects do you believe digital media holds over print to influence companies and consumers to make the switch to its platform?
- Do you believe that digital media is overall more effective than the print medium for delivering information to the consumer?
- Have you seen any opportunities / recent innovations in which print materials can work side-by-side with digital media (for



instance, e-books and websites)? Do you believe that consumers would be attracted to the mixed-media approach?

Interview B

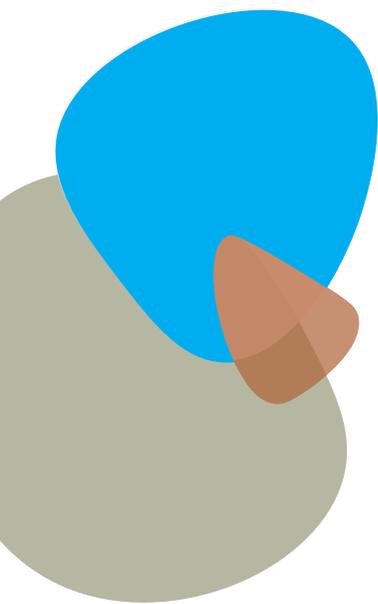
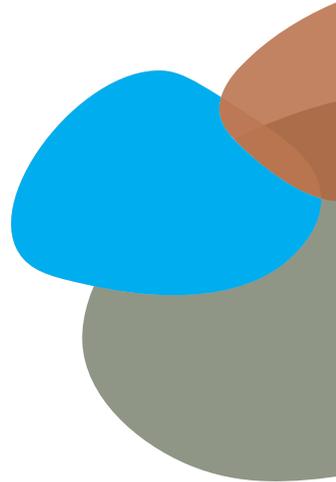
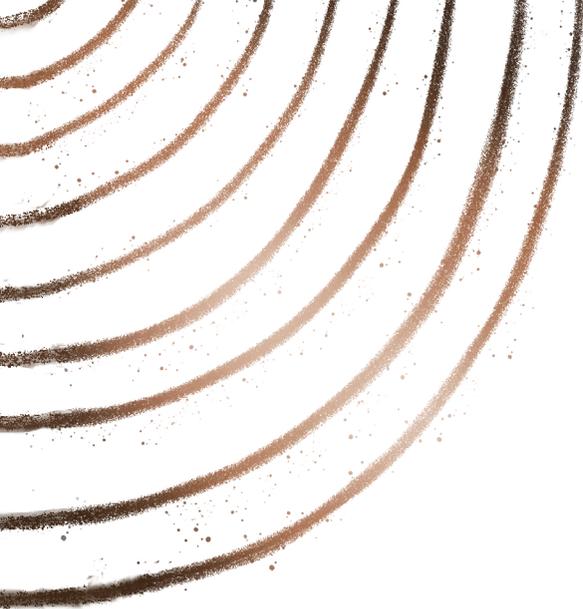
- What changes have you noticed in printed packaging design as the usage of electronic devices is seemingly increasing year-by-year? Have you noticed any trends in terms of graphic design, usage, or interactivity?
- Do you believe that innovative packaging design can contribute to marketing efforts, or even exist as a marketing medium itself? If so, do you believe that this medium can offer an advantage over digital marketing efforts? Why?
- Can you describe any instances in which packaging design could be connected to digital media and / or applications? Do you believe that a side-by-side approach between physical and digital mediums can prove to be overall more attractive to consumers?

Interview C

- Have you seen a shift in consumer demand for physical marketing or printing since when you first started within this industry? How? Has your team, department, or company adjusted to accommodate these changes?
- If you can give a rough percentage, how would you weigh your current digital marketing versus print marketing utilization?
- Has there been any indication that one marketing medium is outperforming the other?
- Do you believe that print can wholly be replaced by a digital medium within marketing? Why or why not?
- What trends do you see for print? Where do you see print being the future?
- Have you noticed a shift in consumer demand because of the current state of the world amongst the pandemic (COVID-19)?



CREDITS



The image features a white background with several overlapping, organic shapes in shades of blue and brown. A large, bright blue circle is positioned in the upper left, partially overlapping a smaller, light brown circle. Below these, there are more overlapping shapes in various shades of brown and blue. In the corners, there are decorative wavy lines with a fine, dotted texture, resembling topographical contours or stylized waves. The text 'MEET OUR TEAM' is centered over the composition in a bold, dark brown, sans-serif font.

**MEET OUR
TEAM**



PRESIDENT

NANCY LY

It has been my privilege to have the opportunity to work with RyeTAGA for the last three years. As I reflect on my journey, I can see how much the student chapter has helped me grow. I am incredibly lucky to have had the opportunity to lead such a brilliant and kind team of students and cannot begin to explain how much time and effort was put into the production of this year's journal, it has been amazing overseeing the entire process – from our early morning Zoom meetings and deciding on the concept and theme, to physically holding the bound book. Thank you to all our sponsors and to GCM faculty and staff for their continued support and for even making it possible to create this beautiful journal. It has been an incredible experience working with RyeTAGA and I have not stopped learning since my first meeting two years ago.



CREATIVE DIRECTOR

SANDRITA FERNANDO

It has been an honour to be a part of RyeTAGA this year as a Creative Director. My associates and I have been putting all of our creative efforts together to bring this year's journal to life. This is the first time I have been in charge of leading a team in a design setting and it has been a great learning opportunity for me to figure out what works and what doesn't. Being a creative director has not only helped me hone in my design skills but also get out of my comfort zone and refine my leadership skills. I am grateful to everyone apart of RyeTAGA who have helped and guided me throughout this journey. I know that this will be one of the most significant and beneficial experiences to come out of my university career. I hope you enjoyed reading this year's journal as much as we did making it!



PRODUCTION DIRECTOR

DANNY WU

It is a privilege to join this year's chapter and as the Production Director I seek to facilitate the production of this year's research journal. I am eager to bring to life the creative direction with which this year's team continually brings to the table. Above all, it is a wonderful opportunity to employ the knowledge and skills that I have learned about print production and material science. I look forward to producing this year's publication and remain adamant that we will do a brilliant job.



EDITORIAL DIRECTOR

ZUHA WAQAR

I am very grateful to work alongside the RyeTAGA team as the Editorial Director this year! My team of five editorial associates and I have worked to cohesively piece together thesis papers from alumni to create our chapter's research journal. Each paper speaks to a significant and intriguing aspect of the graphics communications industry. We hope that this year's research journal highlights the multidisciplinary nature of the print industry and communicates the social implications of such topics within the current social environment. I would like to thank the editorial associates and the RyeTAGA team for their hard work throughout the editorial process. We look forward to sharing our efforts with the TAGA community!



MARKETING DIRECTOR

TIFFANY RAMIRO

Working with RyeTAGA has been one of the best opportunities I've had throughout my university career. Being the 2021-2022 Marketing Director has allowed me to gain knowledge and experience that will help me thrive in the graphic communications industry as a professional. What made that possible is the incredible team that I have been working with both executives and associates. Although our times have been rocky with the current global status, we have made the best out of the situation and we've been able to produce an amazing journal that I am extremely proud of. Putting together and promoting this journal has definitely been a highlight of these times.



MULTIMEDIA DIRECTOR HAIYING ZHANG

It has been my pleasure to work with RyeTAGA for the past three years of my university career. I certainly noticed that my personal and professional skills have grown throughout the previous years. I am thankful to work with such an amazing team and talented individuals during this year's journal. This is one of the best experiences that I have had during the pandemic! The skills that I have acquired in this role are extremely important as the graphic communications industry shifts towards digital publishing with the influence of new technologies. I hope you enjoy reading RyeTAGA's journal this year!



TREASURY & ADMIN DIRECTOR

SAMIR MACKLAI

In the past two years, it has been a privilege to have the opportunity to work with RyeTAGA. Formally accepting my offer to the 2021/2022 RyeTAGA team as the Treasurer and Admin Director, I discovered how the Technical Association of the Graphic Arts involves much behind-the-scenes documentation and multinational corporate relations. Working with many upcoming leaders in the industry, I had the honour to share both creative and analytical discussions to enhance the printed journal for the 2021/22 Student Chapter. My highest appreciation and thanks go to our sponsors, peers, GCM faculty and the Society of the Creative School for their contributions in making this journal unique to our chapter and this year's technical developments. Connecting both scientific research and technological innovation in this diverse field, RyeTAGA continues to incorporate newfound developments locally and internationally while enhancing student learning in the field of graphic communications.

ASSOCIATES

CREATIVE

Wendy Yang
Michelle Lin
Winnie Zhan

EDITORIAL

Kelly Kienapple
Marissa Alavata
Laura Chan-Sing
Beverly Yu
Isela Gomez

MULTIMEDIA

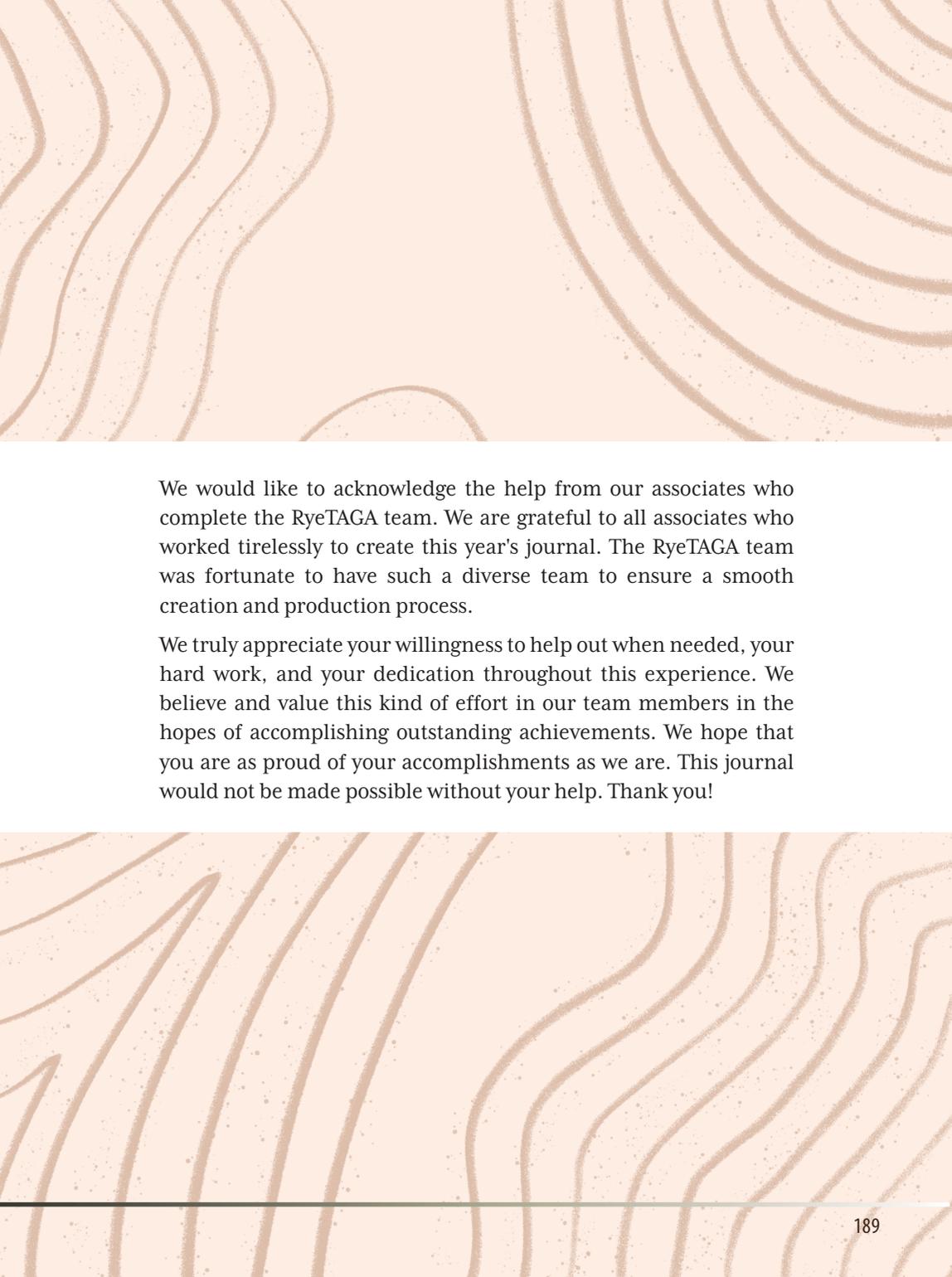
Anna Dang
Darrab Qureshi

MARKETING

Kamesha Abraham
Timothy Aranas

PRODUCTION

Sean Monserrat Lacdan
Timothy Aranas
Kevin Condo
Jessica Daniela Bonilla Flamenco



We would like to acknowledge the help from our associates who complete the RyeTAGA team. We are grateful to all associates who worked tirelessly to create this year's journal. The RyeTAGA team was fortunate to have such a diverse team to ensure a smooth creation and production process.

We truly appreciate your willingness to help out when needed, your hard work, and your dedication throughout this experience. We believe and value this kind of effort in our team members in the hopes of accomplishing outstanding achievements. We hope that you are as proud of your accomplishments as we are. This journal would not be made possible without your help. Thank you!

COLOPHON

Software

Adobe InDesign CC

Adobe Illustrator CC

Adobe Photoshop CC

Adobe Fresco CC

Stocks

Tango C2S Cov 10pt 138# N

Cougar Digital Sm Tex 100#

Typefaces

Myriad Pro

Mrs Eaves XL Serif Nar OT

Equipment

Ricoh Pro C7210X

iGen5

Scodix Ultra Pro + Foil

PRODUCTION NOTES

Over the last two years as we were virtual, students missed out on opportunities to use the equipment at the School of Graphic Communications Management (GCM). As we made a gradual return to campus, students were excited to experiment and learn more about the different printers and softwares. All work was done under the guidance of Martin Habekost, RyeTAGA staff advisor.

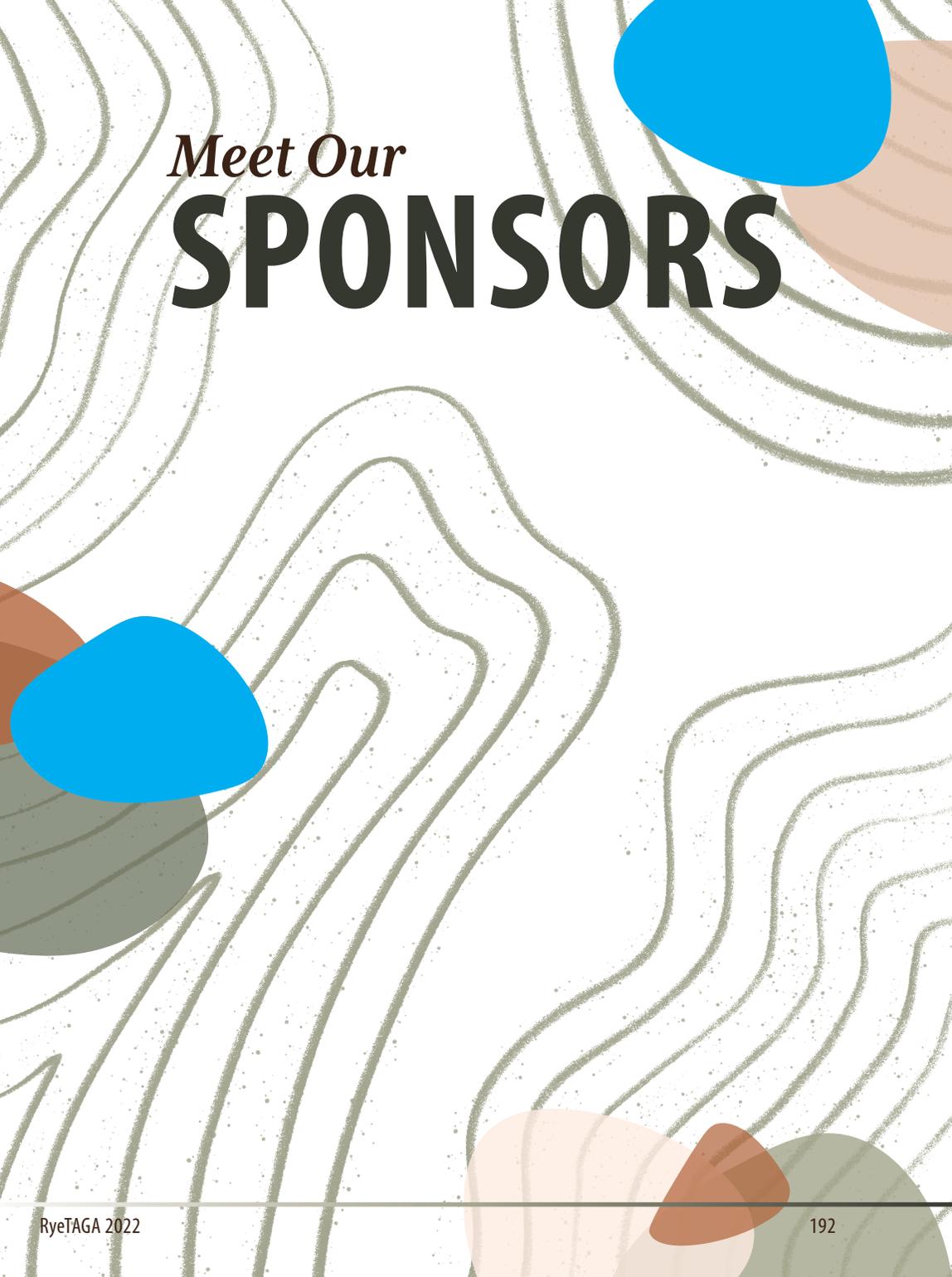
Prepress was done with the help of Scott Millward, Lecturer at GCM, and Khaled Ahmed, Pre-Media IT Specialist. The files were prepared remotely for print by students using KODAK Preps, and a hard proof was printed on campus.

The inside pages of the journal were printed in-house using the Ricoh Pro C7210X. Students worked on the digital press with help from Darsan Sivanantharajah, Client Support Technician at GCM. The Ricoh Pro C7210X's 5th colour station allowed students to experiment with a range of fifth colour options including clear toner.

Signatures were folded using the Heidelberg Stahlfolder, and trimmed to size using the Guillotine with help from Peter Roehrig, Binding and Finishing Technician at GCM.

The cover was printed on iGen5 and was enhanced using the Scodix Ultra Pro + Foil at CJ Graphics. Students collaborated with industry professionals and learned about the different technologies available in the industry and how they can be used creatively to engage your audience.

Binding services were completed with the help of Andrew Nigro, Lecturer at GCM.

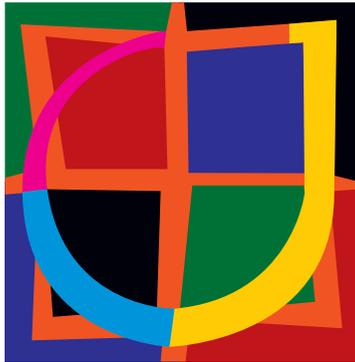
The background features a series of wavy, hand-drawn lines in a light greenish-grey color, creating a topographic or contour-like effect. Overlaid on this are several large, semi-transparent, organic shapes in various colors: a bright blue shape in the top right, a brownish-orange shape in the top right, a blue shape in the middle left, a greyish-blue shape in the middle left, and a mix of light pink, brown, and grey shapes in the bottom right.

Meet Our

SPONSORS



On behalf of the RyeTAGA team, we would like to thank our sponsors for their generous contributions and support in creating this year's journal. The COVID-19 pandemic has brought us all a season of challenges, however, through their support, we were able to bring this journal to life.



CJ GRAPHICS INC.
COMMUNICATION SOLUTIONS



BINDING SERVICES PROVIDED BY:

**ANDREW
NIGRO**

Spicers



Domtar
PAPER

The Creative School

Canon

 **HEIDELBERG**

 **Jones**[™]
HEALTHCARE GROUP

NOTES

A large grid of dots for taking notes, consisting of 20 columns and 30 rows of small, evenly spaced dots on a light beige background.