# Us and Them, Now and Then:
# A historical comparison of the representation of diversity and gender equality in Québec's elementary school textbook illustrations

Beatriz Wolanski Brito

A Thesis
in
The Department
of
Design and Computation Arts

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Design at
Concordia University
Montréal, Québec, Canada

December 2020

**CONCORDIA UNIVERSITY**
**School of Graduate Studies**

This is to certify that the thesis prepared

By: Beatriz Wolanski Brito

Entitled: Us and Them, Now and Then: A historical comparison of the representation of diversity and gender equality in Québec's elementary school textbook illustrations

and submitted in partial fulfillment of the requirements for the degree of

**Master of Design**

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final Examining Committee:

_____ Examiner
*Dr. Carmela Cucuzzella*

_____ Examiner
*Dr. Martin Racine*

_____ Supervisor
*M. Wright*

Approved by _____

Dr. Martin Racine, Graduate Program Director

December 10th, 2020

_____

Dr. Annie Gérin, Faculty of Fine Arts

## ABSTRACT

Us and Them, Now and Then:
A historical comparison of the representation of diversity
and gender equality in Québec's elementary school textbook illustrations

Beatriz Wolanski Brito

This research project investigates how diversity and gender equality have been represented in textbook illustrations in the Canadian province of Québec. It will compare illustrations produced in the 1960s, when the province went through one of its most significant cultural shifts, known as the Quiet Revolution, with those produced in the 2010s. The objective of this investigation is to see how cultural shifts can be perceived in the form of visuals intended for elementary school children and how they work as a window to the understanding of a changing society. Representation, feminism, immigration, tolerance and acceptance are recurrent themes discussed in this project.

Also, this project aims to bring the discussion of the use of illustration for educational purposes to the field of design. A recent surge in research papers that debate the importance of diverse literature and textbooks for children shows an increasing interest in the topic. However, the scholars writing those papers belong to the fields of the social sciences, child psychology and pedagogy, but not to design.

This project advocates for designers' active participation in building knowledge about diversity in children's literature and textbook illustration. Considering how designers have an active role in the production of books and how papers analyzing diversity in children's books may at some point critique the outcome of graphic designers' and illustrators' work, research from a design perspective becomes necessary.



*Keywords*: textbook, graphic design, illustration, education, diversity, multiculturalism

# ACKNOWLEDGEMENTS

I would like to express my gratitude to the following people for their invaluable support, without which this research project would never be possible:

My supervisor M. Wright, whose expertise, encouragement, and kindness were the cornerstone of the development of this thesis.

Prof. Paul Aubin, for curating the amazing collection *Les Manuels Scolaires Québécois*, and his inspiring devotion to textbooks.

The faculty and staff at Concordia University DCART Department, for their unconditional assistance.

The Master of Design cohort, for being a unique combination of wonderful people who have taught me so much.

My husband Gabriel, for holding down the fort while I braved new waters.

# TABLE OF CONTENTS

List of Figures ..... vi

List of Illustrations ..... vii

Chapter 1: Introduction ..... 1

Chapter 2: Theoretical Framework ..... 4

The Social Role of the Textbook ..... 4

Representation and Diversity in Québec ..... 6

An Overlooked Design Problem ..... 9

The Social Role of Design ..... 13

Chapter 3: Methods, Methodology and Data Collection ..... 18

Method ..... 18

Data Visualization ..... 21

Chapter 4: Data Analysis and Discoveries ..... 23

Into the Archives ..... 23

What is not there ..... 31

Chapter 5: Conclusion and Reflections ..... 35

References ..... 39

Textbook Sample ..... 39

Works Cited ..... 40

# LIST OF FIGURES

Figure 2.1: Levels of Change Progression – Idealistic Path ..... 15

Figure 2.2: Levels of Change Progression – Naïve Path ..... 16

Figure 2.3: Levels of Change Progression – Most Likely Path ..... 17

Figure 4.1: Number of Illustrated Pages – Mathematics Textbooks ..... 23

Figure 4.2: Number of Illustrated Pages – History Textbooks ..... 24

Figure 4.3: Human Depictions by Gender – Mathematics Textbooks ..... 25

Figure 4.4: Human Depictions by Ethnicity – Mathematics Textbooks ..... 25

Figure 4.5: Human Depictions by Gender – History Textbooks ..... 29

Figure 4.6: Human Depictions by Ethnicity – History Textbooks ..... 30

Figure 4.7: Representation of Gender in Québec's Textbooks ..... 32

Figure 4.8: Representation of Religion in Québec's Textbooks ..... 33

Figure 4.9: Representation of Middle-Eastern People in Québec's Textbooks ..... 33

Figure 4.10: Representation of Disability in Québec's Textbooks ..... 34

# LIST OF ILLUSTRATIONS

Illustration 2.1: Page from an ISIS textbook, in Iraq ..... 4

Illustration 3.1: Gender representations in the 1960s ..... 20

Illustration 3.2: Gender representations in the 2010s ..... 21

Illustration 4.1: Priest getting dressed, 1961 ..... 26

Illustration 4.2: Girls wearing veils for a religious festivity, 1961 ..... 26

Illustration 4.3: Young girl ironing clothes, 1961 ..... 26

Illustration 4.4: Young boys wearing ice hockey gear, 1961 ..... 27

Illustration 4.5: Man and boy fixing a fence on a farm, 1961 ..... 27

Illustration 4.6: Boy helps man loading a truck, 1961 ..... 27

Illustration 4.7: Stand-alone characters in Math textbook, 2013 ..... 28

Illustration 4.9: Men observe colonizers setting up a cross, 1954 ..... 30

Illustration 4.10: Warriors battle colonizers, 1954 ..... 31

Illustration 4.11: Family inside a *Wigwan*, 2012 ..... 31

# FOREWORD

A few years from now, we will still remember 2020 as the year when everything changed. Hopefully, 2020 will also be remembered as a tipping point, in which we learned a lot about human resilience and adaptability. We learned that things can always get much worse, and that people can divide even further when facing adversity. But we also learned that in the face of tragedy, people can unite towards a common cause.

On January 3rd, 2020, which now feels like decades ago, a declaration by Brazilian President Jair Bolsonaro left me baffled. He stated that Brazilian textbooks used in the public system (which accounts for the majority of students in the country) had "too much text" and needed to be "softened out." He also wanted authors to stop "pushing a leftist agenda" when addressing the violent 21-year-long military regime as a "dictatorship," but rather call it a "revolution." As much as the declarations had me taken aback, a part of me was able to see the silver lining: I had finally encountered the introduction I wanted for my short documentary. Textbooks are seldom a subject on the news media, and I believed this was a very good opportunity to tie my research project to a recent controversy.

In the distant past of January 2020, my plan was to compile the discoveries I made when analyzing textbooks published in Québec between the 1960s and the 2010s into an animated short video, as part of my research project for the Master of Design program at Concordia University. At this point, our cohort was also hard at work elaborating concepts for our upcoming end-of-program exhibition, titled *Interstice*, that would take place in April at Anteism Gallery. I had also just started working as a graphic design instructor at Concordia's Centre for Continuing Education. It was a terribly busy and exciting time. The following months promised a lot of hard work, but also promised a great ending for the two-year program.

On March 12th, as I was wrapping up my evening class, one of my students asked if class would still happen on the next week since there were rumors of University closures. I had not been informed of anything, so I told students that I would send them an email if anything changed. By the time I got home, I had received an email announcing that universities would be closed for the following two weeks in an attempt to deter the rapid spread of the Coronavirus pandemic in Montréal.

From that point on, the signs of a radical change in our way of living were manifesting on a daily basis, and uncertainty became the only constant. Complete commerce shutdowns, grocery stores with low supplies of basic needs, ceaseless fear of contagion. Those were only some of the few things we had to incorporate into our daily lives.

As time went by, we learned that two weeks would be nothing against the virus. Weeks turned into months. Months turned into whole seasons. Our social life became a virtual one. Our work life became a virtual one. Our academic life became a virtual one.

Everyone's plans had suddenly drastically changed, and for an undetermined time. And it is still like this. As I write this, we are currently in the middle of a powerful second wave of cases, which renders our hopes to return to "normal" a distant dream in the long future.

And, as if trying to cope with a pandemic was not difficult enough, we had to witness the deaths of George Floyd and Breonna Taylor in the United States. Unfortunately, these were only the two more recent notorious cases since African Americans are common victims of police brutality. Here, so close to home, we had to hear in outrage about the treatment given to Joyce Echaquan, an Indigenous woman treated inhumanely by workers of Québec's health system. She died at the early age of 37, isolated from her family and having abuse as one of her last human interactions.

We are witnessing the world as we knew collapsing around us. And yet, we saw a proof of human resiliency as never before. The aftermath of George Floyd's and Breonna Taylor's murders brought massive demonstrations from the Black Lives Matter movement. We are now talking about how "not being racist" is not enough. How we need to be actively anti-racist and take action against oppression. Four thousand people united in downtown Montréal to mourn Joyce Echaquan and denounce systemic racism against Indigenous peoples. All of this in the middle of a deadly pandemic.

For disenfranchised minorities, the right of having their voices heard is a matter of life and death as much as Covid-19. And more than ever we see that racism against Black people is not a "Black people's problem"; that racism against Indigenous peoples is not an "Indigenous people's problem." It is everyone's problem. Those systems of oppression will not end while we do not unite as a society, as a province, as a nation, against them.

The research work that I am proposing for this master's thesis, like any manifestation against any type of systemic oppression, becomes more relevant than ever in this context.

Unfortunately, this project had to suffer many adaptations due to the pandemic. The idea of compiling the findings into a documentary had to be discontinued (or, at the very least, indefinitely postponed) and the scope of analysis became much smaller, due to my inability to access the National Archives in this moment. The outcome will be far from what was originally idealized, but if there is anything that living with coronavirus has taught us is that our concept of ideal is gone. We have to adapt and move forward. We must adapt and get the message delivered anyway. This is also a lesson I learned as a designer: all problems are wicked, and we need to be flexible to deal with the unavoidable unexpected that occurs during the process.

The following thesis is the result of a two-year discovery and research project on textbooks, education, oppression, graphic design, and representation. My biggest ambition is that it serves as a small step in the right direction of discussing what we, as designers, can do to help end oppressive systems. I hope that pointing out this problem of lack of proper diverse representation in textbooks works as a steppingstone for braver investigations. It is past due that we stop normalizing our inaptitude to pay respect to our country's diversity. We have to adapt and move forward.

Montréal, November 2020

*Beatriz Wolanski Brito*

# CHAPTER 1: INTRODUCTION

This research project aims to contrast the use of illustration in elementary textbooks in Québec in the 1960s to its use in the 2010s. The analysis of images produced and published in the past and present allows for the observation of how changes in societal values, especially those concerning diversity tolerance and gender equality that happened since the Quiet Revolution, were translated into mass-produced imagery to be consumed by children.

There is a gap between the demographics of Québec's society, and how it is represented in textbook illustration. The objective of this project is to discuss this imagery through a design lens, emphasizing the role of the designer as central in shaping a society's understanding of itself.

***

Often, research is presented as if happening on neutral ground, where the data and rigorous methods should speak for themselves and reveal an impartial truth. Luckily, this research project was developed in Concordia's Design and Computation Arts department, which understands that research is far from being impartial, since it is positioned in contexts that will naturally reflect certain interests, and that it is developed by human beings, prone to their own biases. If we, the researchers, cannot fully ignore context and escape our biases, we might as well disclose why we research what we research, and which factors led us to deem this a story worth telling.

The reasons that drove me to combine textbooks, graphic design, gender equality, and ethnic representation are deeply personal. Nonetheless, this does not make them any less worth discussing. As a graphic designer, I worked for over six years designing textbooks, a professional practice which was as rewarding as it was problematic. In the middle of the summer of 2016, I landed in Québec as an immigrant, following the promise of new life in a prosperous, multicultural and tolerant society. This is the way Québec society is portrayed during immigrant recruitment events abroad, and that was enough reason for me to leave my home, my country, my family, and my career behind. I had given up working with textbooks, a subject about which I was deeply passionate, but the interest and curiosity to understand them never left me.

Another factor worth mentioning is that I was born in Brazil, where I attended design school at a public university. At the UFPR (Universidade Federal do Paraná) we were often reminded that having the privilege of attending a tuition-free and high-quality superior educational institution comes with the moral duty of giving back to the society that enabled this privilege with their tax money. Since that time, I was interested in exploring and discussing the social role of design.

Lastly, as an immigrant and as a self-identified female, I wanted to know if and how my ethnic background and my gender were represented in this new place I chose to live. This is a basic human need, regardless of gender, nationality, and social class: we all want to be accepted; and when removed from our familiar environment and support network, we worry if we will ever be accepted.

Hereby, I acknowledge my privileged position of being in a graduate program at a prestigious Canadian university, which enables me to have a platform to discuss the aforementioned themes.

***

In my initial research on this topic, a cursory analysis of a small sample of three Mathematics textbooks for first-graders found at Québec's National Archives, published in French and in the past decade, revealed pertinent information highlighting the disparity between Québec's diversity and what is represented in textbooks. A simple analysis of the data collected reveals that something is not quite right: between 80% and 100% of the illustrations of human beings only depict white people.

There are quite a few authors that discuss the power of representation, especially when it comes to the imagery to which children and youth are exposed. For Rudine Sims Bishop (1990), this tendency to only represent one segment of society comes with consequences for both the marginalized and the dominant groups.

David B. Berman also discusses how not seeing themselves represented can be damaging to children and young adults. In his book *Do Good ~~Design~~*, he describes the feelings of inferiority expressed by students in Jordan, exposed to advertising that only shows white people. The message for them was clear: there is only one kind of successful people, and you are not one of them (Berman, 2013). Or as Melanie D. Koss puts it very eloquently, "seeing self is critical, but not seeing self is even more critical" (2015).

The theoretical lens that guides this research project is that of designers as active agents in the process of shaping society, especially when it comes to mass-produced media. The guiding principle of this work can be found in Victor Papanek's *Design for the Real World* preface: "There are professions more harmful than industrial design, but only a very few of them" (1985). Combining that with the understanding of design as "changing existing situations into preferred ones" (Simon, 1996), this research intends to critically analyze the designer's ethical commitment to textbook production.

In this research, the textbook is going to be interpreted as a product of the cultural industry (Horkheimer & Adorno, 1972). Even if Horkheimer and Adorno were not describing products that had an educational purpose, the fact that textbooks are mass-produced makes them follow the same rationale as other cultural products. The mass-produced textbook, however, is a very particular case since it has a normative nature and it is not subject to the final consumer appraisal. In other words, the children exposed to those books do not have the choice to do so and yet must interact with and learn from them.

The empowerment of the student is also a fundamental principle in this study. To see themselves as belonging to a community, it is important for children to see themselves represented. This idea derives from Paulo Freire's *Pedagogy of the Oppressed*. Children from all social classes, ethnicities and genders, especially the ones considered marginalized, should not just be assimilated into an oppressive structure, but should have a voice of their own (Freire, 2000). That calls for textbooks that do not reinforce the mechanisms of domination existing between ethnicities and genders, but that incorporate all in an inclusive way.

There are some recent studies regarding images and illustrations intended for children. They debate the influence of this type of imagery in children's visual literacy (Guo et al., 2018); the need for a content analysis for this type of image rather than a descriptive one (McCaffrey & McCaffrey, 2017); textbook illustration as a tool for discussing diversity and human rights and its evolution (Bromley, 2014); and the importance of diversified representations of the human body in early childhood education (Martínez-Bello & Martínez-Bello, 2016). Those studies,

although fundamental to understand current literature about textbook illustration, come from pedagogy or child psychology backgrounds and do not include a design perspective in their results. This proposed research project thus intends to bring the discussion to the field of design.

This research involves other themes that will be researched in more depth. A general knowledge of Québec's educational system and its history as well as Québec's political and cultural history from the past 60 years will be important to better understand the context in which the analyzed images were produced. This could help explain some of the choices made when producing textbooks and illustrations.

In summary, the question that emerges from this research project is: How are issues of diversity and gender equality represented in illustrations for Québec's elementary school textbooks? The objective of this research is to compare the use of illustrations in the 1960s to the ones from the 2010s in the province of Québec and observe how those illustrations followed societal changes. This will serve as a means for future designers, illustrators and art directors to reflect about their future production by observing past and current practices.

***

This thesis is organized according to the following structure. Chapter 2 contains the Theoretical Framework for this research project. It is divided into the following sections: The Social Role of the Textbook; Representation and Diversity in Québec; Empowerment Through Education; An Overlooked Design Problem; and Education as a Design Responsibility. Chapter 3 presents the methods involved in collecting and analyzing the data pertaining to textbooks from the 1960s and the 2010s. Also, this chapter showcases the methods employed for the data visualization of the collected material. Chapter 4 shows a compilation and analysis of the data collected. Chapter 5 offers a conclusion for the findings of this research project and proposes new lines of inquiry that can be explored based on this study.

# CHAPTER 2: THEORETICAL FRAMEWORK

## THE SOCIAL ROLE OF THE TEXTBOOK

Outside of the pedagogical milieu, the textbook is seldom a trending topic, with the exception of a few headlines. One of them is the already mentioned declaration of the Brazilian President – "textbooks have too much text" (Fernandes, 2020). Another one describes the moment Québec researchers were able to retrieve textbooks used in schools under ISIS control, only to discover that students were taught Mathematics by counting Kalashnikovs and war prisoners (Fortier, 2019).


**Illustration 2.1: Page from an ISIS textbook, in Iraq**

*Source:* Fortier, M. (2019, March 18). Incursion dans les écoles de l'État islamique. *Le Devoir*. https://www.ledevoir.com/societe/education/550089/incursion-dans-les-ecoles-de-l-etat-islamique

Indeed, the textbook is far from a benign print media product. Not only it is an instrument of diffusion of knowledge, but also a powerful vehicle for the dissemination of ideologies (Aubin et al., 2006, p. 15).

One notable example of textbooks being used as ideological instruments comes from the United States of America. In the aftermath of the American Civil War (1861-1865), Southern states felt they were being unjustly treated by the way the South was portrayed in literature and pedagogical works (Bailey, 1991). Several organizations, such as the Sons of the Confederate

Veterans and the United Daughters of the Confederacy began a widespread initiative to deter any works that contained contents which could be considered "prejudicial to the South" (Bailey, 1991, p. 517). Rewriting history to cast the South in a more flattering light became the main purpose of the United Daughters of the Confederacy.

> That organization could not rest 'until all the world admits that the Confederate soldiers were ... justified in their construction of constitutional rights,' and 'until every textbook teaches our children.'
> Although the veterans believed most histories discriminated against the South, the Houston report of 1895 rejoiced that a few scholars produced textbooks embodying 'features necessary to an accurate and impartial history of the United States' (Bailey, 1991, p. 514).

This revisionism went so far as softening the harsh realities of slavery, making it seem like enslaved people had an amicable relationship with slave owners, and that work was light and fun (Lowndes, 2017).

Between November 2006 and 2007, the *Bibliothèque* et *Archives Nationales du Québec* (BAnQ) held the exhibition *300 ans de manuels scolaires au Québec*. The exhibition and accompanying catalogue not only displayed several textbooks published and used in classrooms in the province of Québec since 1765, but also discussed the cultural and social meanings of these pedagogical works. From 1965 to 1999, the province produced 9,159 textbooks (Aubin et al., 2006, p. 30).

The researchers involved in the curation and production of the exhibition argue that textbooks play a normative role, in which they depict the dominant values of a society. For example, textbooks of Math and French do not restrict themselves to the teaching of basic knowledge; they also "propose social roles, reinforce stereotypes between girls and boys, or illustrate moral behaviours" (Aubin et al., 2006).

> Le manuel scolaire est beaucoup plus qu'un simple instrument d'apprentissage, il demeure l'un des moyens privilégiés par la société pour transmettre aux enfants et aux adolescents des valeurs qui tiennent à la fois du civisme, du nationalisme, de la morale, de l'hygiène, de la bienséance, etc., bref du comportement social, politique ou culturel à adopter dans la société. Le manuel est un objet culturel en soi, qui nous renseigne sur la société globale dont il est tissu. Témoin de l'évolution de la société, le manuel scolaire en est aussi un des agents de transformation : il présente aux enfants un modèle de ce qu'est ou de ce qu'on voudrait que soit la société ; on comprend dès lors que les principales forces qui encadraient l'école ont surveillé de près le contenu des livres utilisés en classe (Aubin et al., 2006, p. 27).

The textbook plays a dual role, at once a mirror of a society and an agent of its transformation (Aubin et al., 2006, p. 13). Differently from other media, whose objective is to be a representation of its time or a least a critique of its society, the textbook ends up being the most faithful witness of a generation, even without intending to do so (Aubin et al., 2006, p. 11):

> D'autres générations pourront nous décoder en se penchent à leur tour sur ce qui ressemblera de moins en moins à un manuel (ouvrage qu'on tient dans sa main) mais qui demeurera un fidèle témoin, sans trop de filtres, des desseins collectifs d'une époque. (Aubin et al., 2006, p. 11)

As we can see from the examples of the textbooks found in schools controlled by ISIS or the textbooks edited by the United Daughters of the Confederacy, textbooks have an important ideological role beyond their pedagogical one (Aubin et al., 2006, p. 15). Considering this often overlooked and unexplored aspect of the textbook, the following section will analyse the issue of diversity in Québec, and how it is handled in an educational context.

## Representation and Diversity in Québec

The promise of a new life in a prosperous, multicultural, and tolerant society is the reason why so many people decide to leave their homes, their countries, their families, and their careers behind to come to live in Canada. According to Statistics Canada, 1,212,075 new immigrants and refugees settled permanently in Canada between 2011 and 2016 (Statistics Canada, 2017b). The 2016 Census also revealed the presence of over 250 ethnic origins composing Canada's cultural make-up (Statistics Canada, 2017b). And those new arrivals found themselves in an already multiethnic society, considering that by 2016, 41.1% of the total population declared having multiple ethnic origins (Statistics Canada, 2017a).

This is a remarkable trait of Canadian society: policies for immigrants and refugees are a matter of national pride, as illustrated by the words of Canadian Prime Minister Justin Trudeau: "Diversity is Canada's strength" (*"Diversity Is Canada's Strength"*, 2015). Nonetheless, forward-thinking legislation does not apply only to immigration and multiculturalism. Equality between women and men is also one of the key elements of Canadian society. The Global Gender Gap Report 2017, published by the World Economic Forum, places Canada in the 16th position worldwide when it comes to gender equality (*The Global Gender Gap Report 2017*, 2017). By way of comparison, the United States of America is ranked 49th.

The province of Québec has the second highest number of recent  in all of Canada immigrants (Statistics Canada, 2017b). Also Québec is home to 26.6% of Canada's total Black population and to over 180,000 people who self-identify as Indigenous (Government of Canada, 2019a, 2019b). Even though Québec's culture might differ from other provinces in some important aspects (the French language being the most significant one), the respect for diversity and equality between women and men are core values of Québec's society (Immigration, Diversité et Inclusion Québec, 2018a, 2018b). In Montréal schools, children and adolescents belonging to immigrant families correspond to 67.3% of all student population, a number that has been consistently increasing ('Jeunes issus de l'immigration', n.d.).

In the decades of 1960 and 1970, the province of Québec went through a period of deep sociocultural changes, moving from a society influenced profoundly by the Catholic Church to a secular state and open to ethnic and ideological diversity. Naturally, those changes had a direct impact on Québec's school system (Després-Poirier, 1995).

One of the first signs of acknowledgement by the educational system of Québec's impending social diversification came in 1969, when the CSDM (*Commission Scolaire de Montréal*) introduced welcoming classes for students coming from immigrant families (McAndrew, 2010, p. 287). The efforts to integrate immigrant students were expanded in 1998, with major reforms of school boards across the Province (McAndrew, 2010, p. 287).

The way Québec's institutions handle diversity, however, is very different from other provinces in Canada. While most regions in Canada embrace the notion of multiculturalism, the province of Québec favours a so-called policy of "interculturalism" (Kirmayer, 2019, p. 1122). Multiculturalism refers to a goal of "social integration and civic unity through diversity" (Kirmayer, 2019, p. 1128), whereas interculturalism is proposed as an alternative more suited to Québec's reality, which "respect[s] the reality of efforts to maintain language and culture as features of the majority population who conceive of themselves as a nation, not simply as one among many in a multicultural polity" (Kirmayer, 2019, p. 1122).

This emerges from the province's past and its struggle to maintain a French-speaking identity in a predominantly English-speaking continent. Being the only French-speaking province in the Federation, Québec often had to submit to the interests of English-speaking provinces, being only one voice among many (Dickinson & Young, 2003, pp. 251–252).

At the same time, Québec also suffered with internal oppressive forms. Prior to the Quiet Revolution, the Catholic church had such power of influence in Québec's society that it dictated many aspects of the society's living (like education and family life), often in repressive terms (Dickinson & Young, 2003, p. 239). The Catholic clergy had such influence in the society that it decided from who deserved access to higher education to how many children a woman should have (Dickinson & Young, 2003, pp. 243, 248).

During the Quiet Revolution, Québec became empowered to resist to both external and internal systems of oppression. Internally, the province established secular systems of government and, externally, the new strengthened Québec was able to stand up and defend its interests in the broader Canadian context (Dickinson & Young, 2003, p. 305). The French language was also one key aspect that received attention during the period, receiving multiple governmental protection initiatives (Dickinson & Young, 2003, p. 306).

Considering this historical context, Québec positions itself as a vulnerable cultural minority in need of protection in relation to the rest of Canada (Kirmayer, 2019, p. 1122). However, this rationale is still present when narrowing down to the context of the province itself. From this point of view, people of French-colonial ancestry in Québec are the dominant majority in relation to immigrants, Black, and Indigenous peoples, but they still prefer a protectionist approach to their values rather than an inclusive one. As Kirmayer (2019) suggests:

> Although, as a metaphor, interculturalism would seem to imply symmetrical relationships, in the hands of the current Québec government, it has revealed itself as coded language for the institutionalization of systems of domination, marginalization and exclusion of minorities. These local struggles in Québec are instructive because they reflect larger geopolitical forces (2019, p. 1122).

Even though educational policies regarding this intercultural education (*Politique d'intégration scolaire et d'éducation interculturelle*) have existed since the early 2000s, it does

not mean they were widely adopted in the province. In fact, only six school boards outside of the Montréal area adopted the intercultural education policy, even in regions with a considerable number of immigrants (McAndrew, 2012, p. 9).

The problematic interculturalism approach in Québec entails a process of othering of minorities, under the guise of neutrality. Kirmayer suggests that:

> Most versions of interculturalism assume that secular state institutions and civil society provide adequate spaces for recognizing and negotiating cultural, linguistic and religious differences. However, by labelling existing arrangements as neutral or "secular," they may elide the ways, both subtle and explicit, that dominant institutions and practices convey particular cultural positions that may be exclusionary and undermining of others' identities and practices as has become evident in Québec (2019, pp. 1129–1130).

This process of othering groups of people belonging to a given society does not go unnoticed, especially when it comes to education. Since the 1990s, textbooks in Québec seem to be progressively promoting cultural diversity (McAndrew, 2012, p. 15). However, the "diverse" groups are shown in a folkloric way, as exterior to the intended audience. The contribution of non-Western civilizations to Québec's society is often ignored or presented in a stereotypical way, especially in regard to those of Arab or Muslim backgrounds (McAndrew, 2012, p. 15). The situation is even more delicate when it comes to Indigenous representation:

> Issues of cultural identity and community are especially salient for Indigenous Peoples who have sustained deliberate efforts by the state to suppress their cultures. Although they recognize themselves as having distinctive cultures, they also claim the status of nations. Hence, the multicultural solution framed as simply a polyethnic society is not sufficient. From an Indigenous perspective, credible images of co-existence emphasize not integration or assimilation but mutual tolerance and respect, in which Indigenous peoples and Euro-Canadians move along toward a shared future along their own separate paths (Kirmayer, 2019, p. 1132).

The images offered to children, especially in an educational environment, are fundamental to their sense of belonging to their society: not seeing themselves represented has a critical impact in their sense of self (Koss, 2015). Bishop (1990) discusses the impact of this phenomenon:

> When children cannot find themselves reflected in the books they read, or when the images they see are distorted, negative, or laughable, they learn a powerful lesson about how they are devalued in the society of which they are a part (Bishop, 1990).

Not only one's sense of value can be impaired by the lack of responsible representation, but also "it may be corrosive to the sense of recognition, safety and identity of those perceived as Other" (Kirmayer, 2019, p. 1126).

If the consequences are dire for the children who are under- or misrepresented in books, children belonging to the dominant majority are also affected by the lack of diversity in the images they see.

> Children from dominant social groups have always found their mirrors in books, but they, too, have suffered from the lack of availability of books about others. They need the books as windows onto reality, not just on imaginary worlds. They need books that will help them understand the multicultural nature of the world they live in, and their place as a member of just one group, as well as their connections to all other humans. […] books may be one of the few places where children who are socially isolated and insulated from the larger world may meet people unlike themselves. If they see only reflections of themselves, they will grow up with an exaggerated sense of their own importance and value in the world—a dangerous ethnocentrism (Bishop, 1990).

If the current paradigm in Québec's education is still protectionist of traditional French-colonial culture, it is expected that this will be translated into the illustrations of textbooks. However, there are other educational strategies that can be explored in order to create a more inclusive practice in education which will result in a more diverse corpus of illustration.

Evidently, creating systems, especially educational ones, in a heterogenous society is not an easy task. However, as Kirmayer (2019, p. 1132) points out:

> To be readily and reliably available for diverse groups within society, this dialogical relationship requires a larger political commitment not only to individual rights but to civic society as a pluralistic space in which diversity is explicitly valued. A collective identity founded on such diversity and the inclusion of the Other can strengthen communal belonging (2019, p. 1132).

A few scholars have pointed out the problems related to the lack of representation in educational media, as will be discussed in the following section.

## An Overlooked Design Problem

When it comes to the production of mass-produced media, the role of the designer in the production process is very clear. Magazines, advertising, packaging and other products greatly benefit from thorough design insight and expertise. But what if the final project has an educational purpose? How far should graphic designers go in the pedagogical and editorial processes? A recent surge in research papers that debate the importance of diverse literature and textbooks for children shows an increasing interest in the topic. However, the scholars writing those papers belong to the fields of sociology, child education, and literacy, but not to design.

As debates about the role of children's literature and textbooks in teaching for diversity emerge, the fact that none of them comes from a design perspective is noteworthy. Considering how designers have an important role in producing, selecting, and editing the images that are going to be part of publications, bringing the discussion to design scholarship becomes necessary. This is especially pertinent in light of the recent turn in design scholarship toward advocating for a more responsible and critical stance from designers in relation to the outcome of their work and how they can have an impact in culture and society.

That is not to say that design's academic production has been completely dissociated from issues of education. In fact, there are several design studies that propose active participation of

design in the classroom, either in terms of developing new technologies for education (Campbell & Jane, 2012; Milne, 2013), teaching creativity (Im et al., 2015), or using design thinking to challenge teaching paradigms (Noel & Liub, 2017). However, there's little evidence of research in more pragmatic or traditional design interventions for education, that is, textbook design and illustration.

Yet, those traditional design outcomes are not innocuous. They might not be as innovative as the proposed practices in the aforementioned studies, but they still have an impact on education and do not go unnoticed by education scholars. Guo et al. (2018) discuss how the plethora of visuals in textbooks contribute to the understanding of pedagogical contents and that often they are neither selected nor produced in any rigorous way, therefore failing in their intent of helping students understand concepts and build knowledge (Guo et al., 2018). This is a serious critique of designers' participation in the production of textbooks, by implying a lack of thoughtfulness in the production of these images. Studies like the ones below can be either a source of useful information or ideas for future design projects.

To further understand how scholars from disciplines other than design address this issue, I analyzed four articles written in the past decade. The four research papers investigate how early childhood education textbooks and children's literature deal with the subject of diversity. From analysing their conclusions, we are able then to discuss how the results from those studies can be an important information source for the book design process. Also, we can observe design interventions that could address the questions raised in those research papers.

The research papers analysed are:

1. Legitimacy and the Contingent Diffusion of World Culture: Diversity and Human Rights in Social Science Textbooks, Divergent Cross-National Patterns (1970-2008), by Patricia Bromley, 2014.
2. Diversity in Contemporary Picturebooks: A Content Analysis, by Melanie D. Koss, 2015.
3. Depictions of Human Bodies in the Illustrations of Early Childhood Textbooks, by Vladimir Martínez-Bello and Daniel Martínez-Bello, 2016.
4. Moving Beyond the Common Core Text Exemplars: A Need for Diversity, by Megan McCaffrey and Charles McCaffrey, 2017.

Analysing where those papers were published, reveals what fields of academia have scholars discussing the issues of diversity in books for children: Sociology (text 1), Child Education (texts 2 and 3), and Literacy (text 4).

Bromley (2014) discusses in her article that there is a tendency in textbooks to include progressively more content about diversity and human rights. This is true especially for countries she considers "secure, politically stable, and culturally cohesive" (Bromley, 2014), such as Canada. She draws her conclusions after analysing 501 textbooks from over 67 countries, published between 1970 and 2008. It is important, however, to see if this discourse is translated into illustrations and images. This is the point where a design intervention would be particularly important: to ensure that pedagogical goals match the image content of textbooks. Another point she raises in her text is about the difference between the concepts of "human rights" and "diversity rights." While the first discusses equal treatment to all people, the second takes into consideration a society's heterogeneity, in which different groups have distinctive necessities.

This has a parallel in design discourse, in Katherine McCoy's (2003) questions: how to develop solutions that can be adequate for a large number of people without trying to homogenize the needs of a pluralistic society? Even if some of these books are mass-produced, designers cannot simply ignore differences between groups of a society and only offer "one-size-fits-all" solutions, which means those will be barely adequate to almost no one.

In a content analysis of 455 children's picture books published in 2012 by U.S. trade publishers, Koss (2015) discusses how this medium has been incorporating issues of diversity. Her findings show an imbalance of representation of white characters versus non-white characters, with special attention to the lack of representation of Asian, Latino, Native American and Middle-Eastern characters (all of those ethnicities together are represented as the primary culture of the book in only 5% of the books sampled). In terms of gender, characters were evenly represented in the books most of the time. However, female characters were more likely to be represented in a stereotypical manner, mostly related to gender roles (such as housekeeping, childbearing, etc.) (Koss, 2015). She ends her study by suggesting that her findings should be used by teachers to help them in becoming more aware of this subject when including books in their curriculum. However, designers should also see studies like this as fundamental when participating in the production of children's books (literature and textbooks).

Martínez-Bello and Martínez-Bello (2016), in analysing early childhood education textbooks in Colombia, noted that even though there is a gender balance in the textbooks of the sample, disability remained an underrepresented issue in textbook illustration. This study, however, seems to contradict Bromley's findings, in which so-called "secure and stable" countries would be more likely to have more inclusive books. Even though Colombian books still overlooked people with disabilities, compared to the studies that analysed books in the U.S., it was the one where the sampled books had more diverse characters. This calls for a design investigation and content analysis to see what is causing this apparent contradiction.

McCaffrey and McCaffrey (2017), in analysing children's literature in the US, observed a trend of overrepresentation of able-bodied white males. They analysed 57 common core text exemplars, which means that those works are of classical and historical significance or they are contemporary works of similar merit, and hence widely used in U.S. schools. The study points out that up until the 1960s, children's literature was about an "all-white world." Despite a significant increase in diverse literature since then, there is still a gap to be addressed. As in Koss's article, McCaffrey and McCaffrey intended that their study would be a useful guide for teachers in selecting texts to be used in the classroom. Again, those findings are not useful only for teachers but also for designers engaged in the production of children's books, who could benefit from this type of information for improving the outcome of their work in terms of diversity and inclusion.

The articles agree on one point: more diverse and inclusive children's literature and textbooks are not just desirable, but necessary. Even if they analyse books from different countries and from different perspectives, there seems to be a consensus on how important diversity is and how it should be present in educational media.

All four articles analysed agree, at different levels, that using children's literature and textbooks as tools for education for diversity is important and that, yet, the way those books depict diversity is far from ideal. Also, the articles show that there is a prevalence of depicting white-male-able-bodied characters in this medium, even if there is a consensus among education

scholars that showing a diversity of pictures (and narratives) is essential for a more inclusive pedagogy.

Another point worth of noticing is that, even though those articles discuss the power of imagery, none of them is published by design scholars. Also, those articles don't suggest that the results of their findings could be used by design scholars or design practitioners to improve these books. Mainly, they conclude saying that their findings can help teachers in making more informed decisions when choosing the books they will use in the classroom. However, none of them suggest improving the quality of these books to begin with. This brings us back to one of the central points in this project: that scholarship about diversity in children's literature and textbooks can and should be used by designers, since they are part of the publishing process, and therefore responsible for non-optimal outcomes.

Again, designers should not only be more aware of the findings of this type of research, but they should start producing their own knowledge on education for diversity, one that takes into account how design can have an impact in improving the potential of children's books to be used for education for diversity.

Analysing current publications on diversity and children's books reveals what the current demands from sociologists and educators are when it comes to producing more inclusive reading material for children. With this knowledge in hand, designers can be more prepared to use the full potential of illustration for learning purposes. Not only that but analysing this type of study shows that there is a lot of room for more complex design interventions in textbooks. This realization calls for design research, in partnership with educators, to develop more knowledge on how to deal with the issues of diversity and inclusion in textbook illustration.

Hopefully, this discovery will open new possibilities for investigation for design scholarship to engage with themes of diversity in children's books. There are several lines of inquiry that could be explored, such as how the process of designing those books takes place. Other future opportunities for design research could involve engaging with communities (especially those often underrepresented in children's books) and, using co-design methods, devise new ways of dealing with inclusion in children's books. In summary, there are a lot of potential benefits in bringing the discussion of diversity in education to design scholarship.

Discussions about the role of children's literature and textbooks in educating for diversity has only recently started emerging in different fields of academia. This is the perfect opportunity for design scholarship to engage in this discussion and add the "making" aspect of those books as part of the conversation. A responsible and inclusive process can have a significant impact on children's lives when it takes into consideration the importance of representation and the value of honouring the diversity of a given society. Having respectful and inclusive books in the classroom should not be only a matter of educators knowing how to find them amid insensitive ones, but transforming the whole publishing process, so that teachers have a bigger pool of good options from which to choose.

The next section will discuss the urgency for designers to finally take responsibility for the consequences of their work on textbooks and other educational media, and discusses a few ways of how to deal with the issue of lack of representation of marginalized groups in textbooks.

## THE SOCIAL ROLE OF DESIGN

In the same way that Design Thinking authors (Brown, 2009) argue for designers to intervene in the early stages of the conception of products and services – and not only at the end of the process, as a *veneer of form* (Latour, 2008) – this project advocates for designers to take a more proactive position in the editorial process, working in direct partnership with educators and content editors, and other stakeholders, in the conception of images for children's literature and textbooks. Not only that, but studies on Social Design and Design Responsibility urge designers to take a more critical stance towards their production and how it affects the society for which they practice.

This section advocates for designers' active participation in building knowledge about diversity in children's literature and textbook illustration. Designers have an active role in the production of textbooks: be it as desktop publishers, art directors, photographers, and illustrators, they are the ones creating, selecting and editing the images that will be then purveyed to educators and students. In this sense, research that not only acknowledges and debates this participation, but also reflects upon it from a design perspective becomes necessary.

Authors on design responsibility and social design, have been discussing in the past decade the implications of design work in society. Design historian Alison J. Clarke talks about the shift occurring in design practice from market-driven to the "social":

> Social design … has seen an exponential expansion in the last decade. Design is no longer a twentieth-century studio-based practice confined to the authorship of given individuals, or the strictures of a purely profit-driven design management team working to a -fixed brief and a crude consumer profile (Clarke, 2015, p. 164).

Katherine McCoy, an American graphic designer and educator, acknowledges designers' role in social dynamics:

> How can a heterogeneous society develop shared values and yet encourage cultural diversity and personal freedom? Designers and design education are part of the problem and can be part of the answer. We cannot afford to be passive anymore. Designers must be good citizens and participate in the shaping of our government and society (McCoy, 2003).

David Berman is another design author that calls attention to the fact that designers shape the world around us in significant ways and, therefore, should be aware of the responsibility that entails from design practice:

> Designers have an essential social responsibility because design is at the core of the world's largest challenges… and solutions. Designers create so much of the world we live in, the things we consume, and the expectations we seek to fulfil. They shape what we see, what we use, what we waste. Design has enormous power to influence how we engage our world and how we envision our future (Berman, 2013).

Those two passages show that discussions on design's active influence in society already exist. Designers are more than ever aware of the consequences of their work in shaping society. Jorge

Frascara is another design scholar to point out the cultural implication of design work, and its power to define norms:

> This cultural impact affects the way people operate with other people, as well as with things, and creates a cultural consensus. More must be done to understand this cultural impact if designers are to operate more responsibly in society (Frascara, 2016, p. 54).

Combining the ideas from the design scholars above, and applying them to the medium of textbooks, shows us an immense opportunity for lines of inquiry connecting the subjects of design's social responsibility and textbooks. As discussed in the section "The Social Role of the Textbook," the textbook is by nature a product of cultural consensus. The question of designers involved in the production of textbooks being aware or not of this phenomenon becomes irrelevant: the crystallization of systems of oppression happens regardless of will, and that should be avoided at all costs.

If the notion that design plays an important part in creating cultural impact is already acknowledged within the discipline (Frascara, 2016, p. 54), designers still have a long way to go in order to actually start incorporating these notions into their practice. Williams (2019), for example, talks about the way design handles issues of race:

> The fact that designers so rarely name race, for instance, is instrumental to their ability to abstract race from the politic that gives it power. When unspoken, race remains present as a circumstantial consideration in the investigations that inform design projects, but is rarely the subject of design interventions themselves (Williams, 2019, p. 315).

The means to achieve a more ethnically responsible and gender egalitarian design practice for textbooks are still unknown. There are a few possibilities that can be explored. However, in isolation, they cannot be considered the "correct" way or be used as the all-encompassing solution to classify a design as "ethnically-sound" or "gender-inclusive".

Here then, I propose four levels of design responses to the lack of diversity and gender equality in textbook illustration:

1. Outcome change;
2. Process change;
3. Practitioner change;
4. Cultural change.

The first, and more obvious response, would be, in the case of textbooks, simply to include more diverse representations better suited to a society's reality. However, this approach can generate several pitfalls, like the tokenization of racial representation. More importantly, it does little to identify the systems of oppression that are involved in the educational system as a whole (Who are the decision-makers? Who are the policy-makers? Who are the owners of the publishing houses? Who are the content editors?).

The second response entails a change in design process to a more inclusive one, where people of underrepresented identities are included in the process via methods of participatory design and co-design. Even if this approach seems reasonable, the dynamic between designer and audience

can become problematic or even paternalistic. As Freire points out, change that stems solely from the oppressor to the oppressed often results in false generosity (Freire, 2000, p. 54). Lest the underrepresented group becomes another market segmentation, now better understood for the means of capitalist exploration, this approach contains potential pitfalls.

A third response would be to look at the demographics of designers and see how well segments of society are represented among the practitioners that create educational imagery. The *Design Census 2019*, created by Google and AIGA, shows that, in the US, 71% are white/Caucasian, 9% are Asian, and all other ethnicities are relegated to the 20% left (*Design Census 2019*, 2019). In Canada, RGD's *Creative Earners* report turns a blind eye to questions of race and does not even include ethnicity among their data (2019). However, there is little indication that the Canadian reality would be any different than the American one. The problem with this response is that, in order to become more diversified itself, design needs change starting from its very foundations. As Elaine Lopez  points out, "[o]ne of the main problems with the lack of diversity in design is that only a white, male perspective has been represented historically" (2019, p. 69). This process is a slow one, and underrepresented minorities do not have the luxury to wait for a major design practice transformation to have the basic need of seeing themselves represented as part of the society to which they rightfully belong fulfilled.

The fourth response, and the ideal one, is that through major cultural change, equality between different groups in society will thereby enable a diversification of people in places of power and decision making, which will eventually be translated into textbook illustration, since the textbook is the "faithful witness" to the aspirations of the society in which is produced (Aubin et al., 2006, p. 11).

The most seamless and organic path to achieve this change in representation would follow the levels as depicted on figure 2.1. As mentioned before, however, waiting for society to change in order to expect a change in textbook illustration is basically an exercise in passivity from the design standpoint.

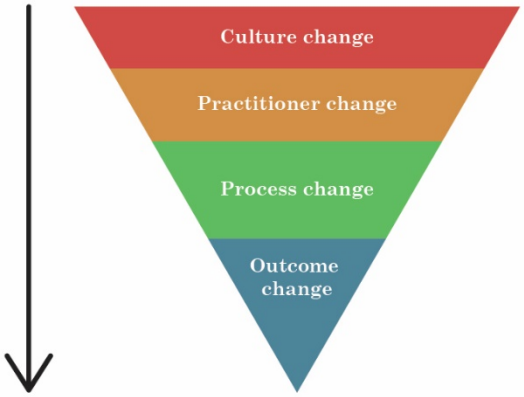


**Figure 2.1: Levels of Change Progression – Idealistic Path**

Another approach would be moving in the opposite order of the proposed levels, from the more practical one (outcome change) to the most overarching one (culture change). If textbooks also work as an agent of society's transformation, starting by changing them could lead to process, then practitioner, then cultural change. I call this progression the "naïve path" (figure 2.2). It is highly unlikely that, without changes coming from culture, process, and practitioners, that the outcome will be benevolently changed. Or even worse, the outcome change comes in a manner that tokenizes or stereotypes underrepresented minorities even further.

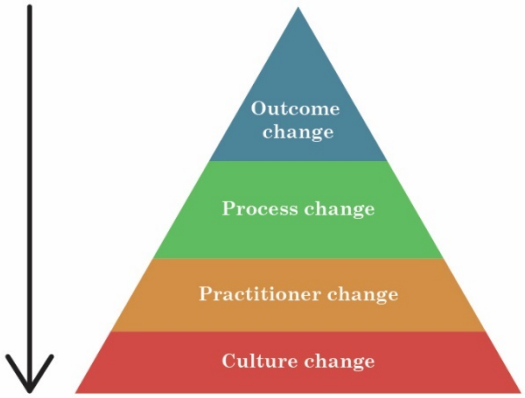


**Figure 2.2: Levels of Change Progression – Naïve Path**

The most likely scenario will happen as depicted in figure 2.3. Multiple and simultaneous efforts from different fronts will create iterative responses that eventually lead to major cultural change.

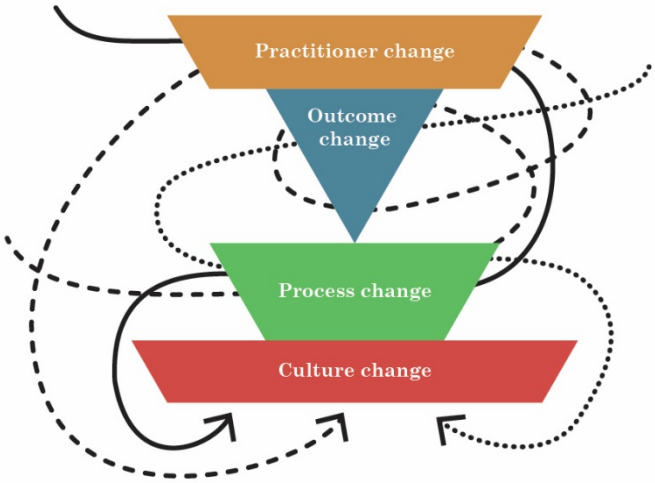


**Figure 2.3: Levels of Change Progression – Most Likely Path**

It begs the question though: what can designers do in this process? Understanding the problem is the very first step. Also, acknowledging one's position of privilege and their role in the process of oppression may help us sensitize the design community as a whole, rendering it more open to new narratives and more inclusive in its practices and outcomes.

In the pedagogical editorial process, there are many fronts in which designers can operate. Typically, the publishing process of educational work includes the author (usually someone with vast pedagogical knowledge), content editors (also education experts), art directors, iconographers (who research and select images for the publication from stock image providers and other image licensing entities), photographers, illustrators (who produce custom images) and desktop publishers. Usually, stakeholders from art directors forward are included in the process only after an official manuscript is ready for production and commissions for illustrations are already decided by authors and editors. In a Design Thinking approach, art directors, iconographers and illustrators could already intervene earlier in the stages of publication (prior to the submission of the manuscript), understanding the demands from authors and editors and helping formulate photography and illustration commissions, identifying opportunities for more inclusive and diverse approaches. At this point in the process, there is even the possibility of having participatory and co-design techniques employed, which could include the stakeholders who are ultimately engaging with the textbooks on a daily basis, like teachers and students. Further down the process, it is important that iconographers, illustrators, and desktop publishers have more direct communication with authors and editors (via mediation of the art director or not) and are empowered enough to question the use of imagery.

A few years may pass before any improvement becomes noteworthy. As discussions about the social role of design become more frequent, hopefully, the role that design plays in education becomes a more evident one. And as it happens, designers may be more open to discuss ideas that go beyond the white Eurocentric narrative. As Frascara suggests, we need to extend the designer's realm of competence and focus on where it can actually make a difference (2016, pp. 54–55). The role of designers in education, more specifically in textbook illustration, might seem a small one, but is one with great importance and repercussions.

# CHAPTER 3: METHODS, METHODOLOGY AND DATA COLLECTION

## METHOD

For a problem as complex as the one discussed in this research project, it is important to focus on the problem *setting*, rather than proposing solutions right away. As Donald A. Schön proposes:

> In real-world practice, problems do not present themselves to the practitioner as givens. They must be constructed from the materials of problematic situations which are puzzling, troubling, and uncertain. In order to convert a problematic situation to a problem, a practitioner must do a certain kind of work (1983, p. 40).

For this research, I apply a quantitative methodology to gather more data about the lack of representation of diversity in Québec and understand how this problem manifests. With this concrete data, any reflection derived from these themes becomes grounded into palpable information.

The problem setting is then used as a method to "name the things to which we will attend and frame the context in which we will attend to them" (Schön, 1983, p. 40). The quantitative and archival data collected serves as a steppingstone for a series of reflections that help to better understand the problem and investigate how design can contribute to this inquiry and propose solutions in the future.

## SAMPLE

In defining the sample collection, a few criteria were established. Considering how the Quiet Revolution of the 1960s and 1970s had a significant impact in Québec's cultural, political and educational landscape (Després-Poirier, 1995), I decided to sample elementary school textbooks from this point in history forwards. Originally, this archival and historical research would cover a period of almost 60 years. However, due to the inability to access the National Archives due to Covid-19, this project had to continue with only the initial set of data collected, which consisted of books of Mathematics and History from the 1960s and the 2010s.

The type of textbooks analyzed were also limited in terms of age group. This research focuses on textbooks of elementary level, more specifically between the 3rd and 5th grades. Keeping the sample restricted to elementary school textbooks is relevant not only because of how images have a prominent role in elementary literacy (Guo et al., 2018) but also for practical reasons: the younger the audience, the more densely illustrated the books, and the less technical the nature of those illustrations.

Currently, Québec's Education program for elementary level is divided into five subject areas: Languages; Mathematics, Science and Technology; Social Sciences; Arts Education; and Personal Development (Ministère de l'Éducation, 2001). As Guo et al. (2018) propose, the use of illustration from one subject to the other can vary in terms of strategy and content. As a way to have a greater variety of images, the sample will include books from two (seemingly) distant

subject areas: Mathematics, Science and Technology (more specifically, Mathematics); and Social Sciences (more specifically, History).

As for language, the sample includes only books published in French, considering that Québec is a predominantly French-speaking province, leading to a larger availability of material. It is important that the books belonging to the sample should be edited and produced locally, as opposed to being imported from other French-speaking countries (notably France). Textbooks from other French-speaking countries will be disregarded since they clearly would not be produced with the intention of depicting Québec's society. Selecting books produced and published locally ensures that there would be at least some intention on the part of publishers to represent the social context in which students are placed, and thus facilitating an analysis of a society through textbook illustration.

The purpose of using archival research is not to find answers about the lack of diverse representations in textbook illustration, but to get a better understanding of how those illustrations were produced and place them in a historical context. The idea behind conducting archival research is to enable future discussions about the theme, as Michele T. King proposes: "we go to the archives not to find answers, but articulate a better set of questions" (King, 2016), which is the intent of this research project. The main source of data collection was Québec's National Archives at BAnQ (*Bibliothèque et Archives Nationales du Québec*).

The final sample includes 8 Mathematics textbooks (4 published in the 1960s and 4 in the 2010s) and 6 History textbooks (3 published in the 1960s and 3 in the 2010s). All of them belonged to the first years of elementary school (according to Québec's classification). The books in the sample were all published in French in the province of Québec.

## CRITERIA

For this study, "illustration" is understood as non-photographic images that accompany texts, whether to aid textual comprehension or just for decoration, including drawings, paintings, etchings, or collages. Also, the definition of illustration in this study refers only to pictorial images, excluding tables, diagrams, and flowcharts (or any other schematic image), according to the definitions by Twyman (Twyman, 1985).

The first step into analysing the books consisted of observing the prevalence of illustrated versus non-illustrated pages. Secondly, I conducted a more detailed analysis of the representation of the human figure, then establishing a few criteria for the inclusion of images to the sample:

- Only include illustration that represented human beings (anthropomorphized animals and objects were not considered).
- Even repeated, each occurrence of the same human figure (as occurs with recurring characters and "mascots") was counted as one entry.
- Characters without distinctive features (whether because they are represented too small, far in the background, or as shadows or silhouettes) were not considered, due to the impossibility to attribute gender or ethnicity to them.
- Reproduction of human figures from other type of media (comic strips, works of art, advertising, stamps, currency, etc.) were not included in the sample, even if they are technically illustrations.

- Only body matter illustrations were considered, not including cover and back cover.
- Representations of dolls were not considered as human figures.
- Illustrations that show only a body part (hands, feet, etc.) were not considered.

Considering these criteria, the illustrations of each volume were analysed and quantitatively compiled in terms of representations of gender and ethnicity. Also, some qualitative observations were made regarding the representation of gender equality, ethnicity, social organization, and religion.

For this study in particular the definitions of ethnicities followed the ones used by Statistics Canada (the organism responsible for conducting the Canadian census) of visible minorities (Statistics Canada, 2015). As for gender, even though it happens on a spectrum that goes beyond the male-female binary, all representations of human beings in the data sample used gender identifiers that were very stereotypical (illustrations 3.1 and 3.2), leaving little room for ambiguity of the representation of non-binary people. That is why, on the data analysis section, when it comes to gender, data is compiled in terms of male or female.

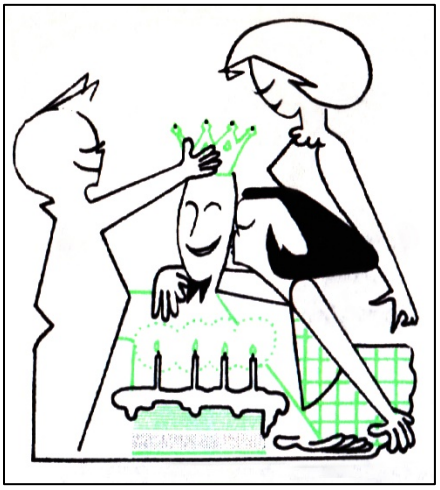

**Illustration 3.1: Gender representations in the 1960s**

Source: Beaudry, G., Saboutin, A., Levasseur, R., & Demers, M.-J. (1965). *Le Cacul Vivant, Arithmétique 3e année*. Centre de Psychologie et de Pédagogie.

**Illustration 3.2: Gender representations in the 2010s**

*Source:* From Gallant, C., & Perron, D. (2013). *Multimathique: Mathématique : 3e année*. Éditions Grand Duc.

## Data Visualization

The set of data collected from these books could be considered very straightforward, and therefore its visualization would not need much more than a part-to-whole chart, like common pie charts. Nonetheless, this project aims to highlight the lack of representation of certain segments of the society, which a common pie chart would not communicate.

Beyond the representation of the data per se, this project aims to display the collected data using an artistic approach (Hall, 2017, pp. 171–175), and offers a critical approach that goes further than the simple analysis of numbers. The goal here is exactly not to be objective and make this explicit. It is in alignment with this project's positionality to acknowledge that all data carry an embedded bias. As Peter Hall notes:

> Yet the end result, the visualization, carries an authority, timelessness, and objectivity that belies its origins. Curiously, this fact is neglected in the otherwise rich discourse around data visualization and information design (2017, p. 171).

Even if the data collection of this study reflects a somewhat "scientific" process, with a defined set of criteria and a recognizable methodology, the representation of pure data holds only a fraction of the understanding of the phenomenon occurring with the use of illustration in Québec.

As demonstrated in the upcoming chapter, if the collected data shows the distribution of characters between male and female genders, it does little to acknowledge the lack of representation of non-binary people. The same goes for other groups that, even though they are part of Québec's society, are not represented in any of the analyzed books. This creates a design challenge: how to represent the lack of data?

Initially, I compiled the collected data into classic pie charts. However, this model of chart is not very impactful in showing the “zero value,” as that would require textual information to be understood. The same goes for other types of graphs, like bar and line charts: mostly, to represent the value of “zero,” they would have to look like unpopulated charts. Even if this would be mathematically acceptable, it does not add significance to the visual impact intended by this project.

After some speculation, a type of chart that would be capable of visually representing the “non-data” is the pictograph (or picture graph, or icon chart). By itself, this type of chart does not contain a “zero value,” but when combined with other pictographs that contain some sort of data different than zero, the perception of “non-data” becomes clearer. In pictographs, one picture (either an icon or illustration) is used as a unit of value, and through its repetition and coloring can showcase the many parts comprising a whole set. Besides the advantage of using a chart that can represent the “non-data,” the fact that pictographs allow the use a pictorial image as a value unit can help to humanize the data.

The next chapter will show the results and discoveries from the analysis of the textbooks collected at the BAnQ collection, with the findings which were then compiled into pictographs.

# CHAPTER 4: DATA ANALYSIS AND DISCOVERIES

## INTO THE ARCHIVES

The objective of going into the BAnQ and examining the collection of textbooks of Québec, curated by Professor Paul Aubin of Université Laval, was to understand the use of illustration in a pedagogical context.

As demonstrated in figures 4.1 and 4.2, illustration was already heavily used in Québec's textbooks in the 1960s. In both History and Mathematics exemplars, more than 30% of pages had illustrations. This value increases considerably in the 2010s, surpassing the mark of 80% of pages.

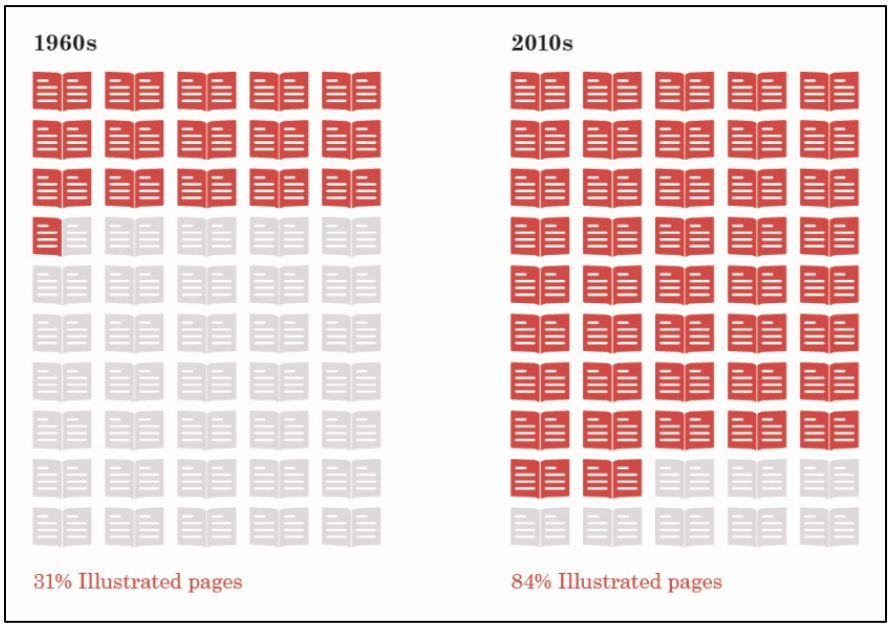


**Figure 4.1: Number of Illustrated Pages – Mathematics Textbooks**

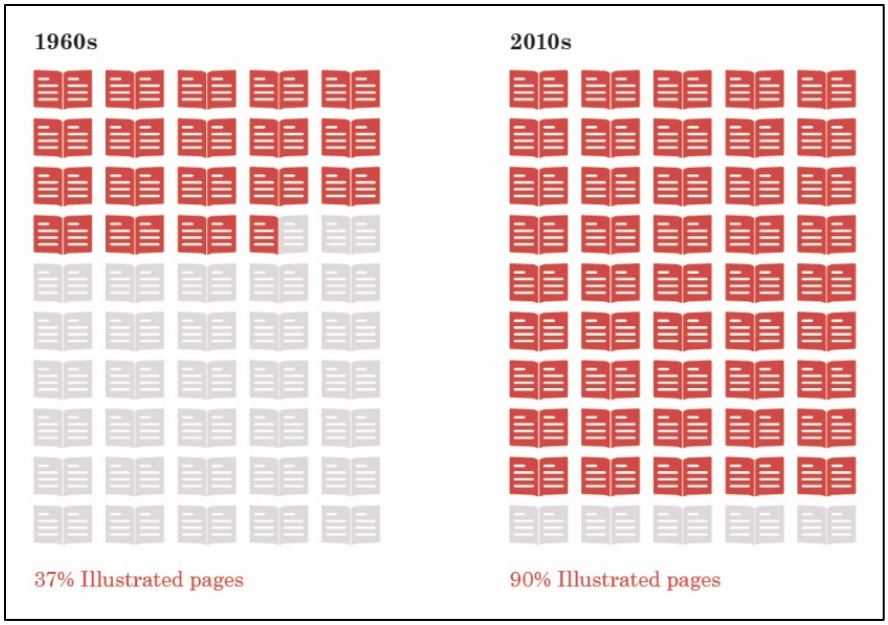


**Figure 4.2: Number of Illustrated Pages – History Textbooks**

As previously stated, this observation confirms the different strategies employed in the use of illustration between the two disciplines. While Math books use mostly stand-alone objects and characters laid out on the page, History books contain elaborated and contextualized scenes, depicting the human figure more often than Math illustration. In the Math books, there were representations of 259 human figures in the 1960s and 243 figures in the 2010s. For History books, there were 814 human figures in the 1960s and 535 in the 2010s.

## MATH TEXTBOOKS

When analyzing Math textbooks, the quantity of women represented in relation to the representation of men was also observed. As expected, in the 1960s, the majority of human figures represented male subjects. This proportion tends toward balance in the 2010s, as illustrated by figure 4.3.

The most noticeable difference between illustration in the 1960s and the 2010s is in regard to ethnic diversity. In the 1960s, there was not a single depiction of a non-white person. The white ethnicity was still the most prevalent one in the 2010s, however, other ethnicities start to be depicted, as figure 4.4 shows.

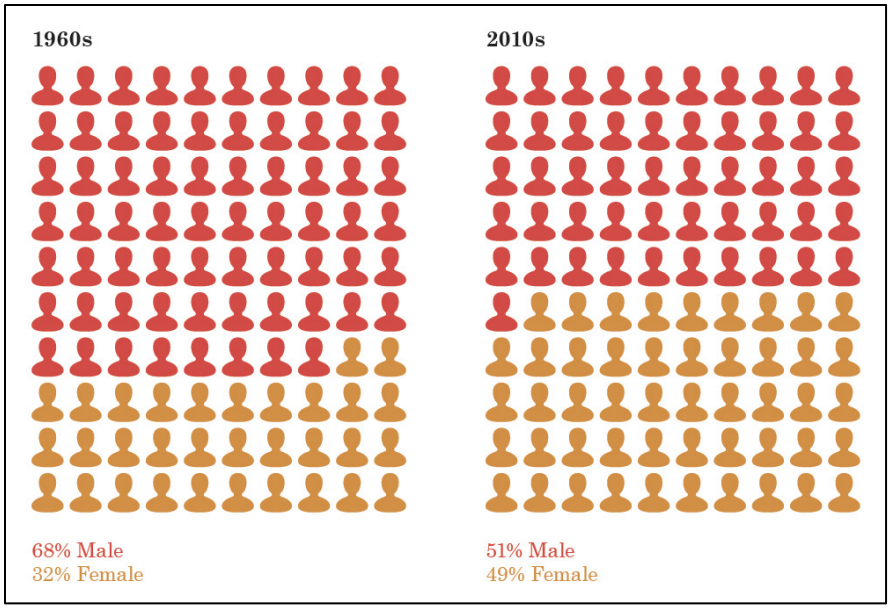


**Figure 4.3: Human Depictions by Gender – Mathematics Textbooks**


**Figure 4.4: Human Depictions by Ethnicity – Mathematics Textbooks**

During the analysis of the illustrations, some other interesting points emerged. Not only these are worth mentioning, but they also represent a potential for further investigation.

In the 1960s, even if not represented in a massive way, the influence of the Catholic Church on the society is clear. A few scenes depict Catholic worship practices, which is unexpected for a

Math book. Some of the pages included illustrations featuring children praying, Catholic priests (illustration 4.1) and religious celebrations (illustration 4.2).

**Illustration 4.1: Priest getting dressed, 1961**

**Illustration 4.2: Girls wearing veils for a religious festivity, 1961**

*Source:* Both illustrations from: Ladouceur, J.-P. (1961). *Arithmétique 3e année*. Les Frères du Sacré-Coeur.

Still in this decade, we can observe the representation of women and girls (which were already the minority of human figures) often engaged in domestic work (illustration 4.3), such as cooking and childcare. Men and boys, on the other hand, are depicted playing sports (illustration 4.4) or conducting manual labour (like farming or woodwork).

**Illustration 4.3: Young girl ironing clothes, 1961**

**Illustration 4.4: Young boys wearing ice hockey gear, 1961**

*Source:* Both illustrations from: Ladouceur, J.-P. (1961). *Arithmétique 3e année*. Les Frères du Sacré-Coeur.

The agricultural tradition of Québec is also present in the books, with several scenes depicting countryside landscapes and farm work (illustrations 4.5 and 4.6).

**Illustration 4.5: Man and boy fixing a fence on a farm, 1961**

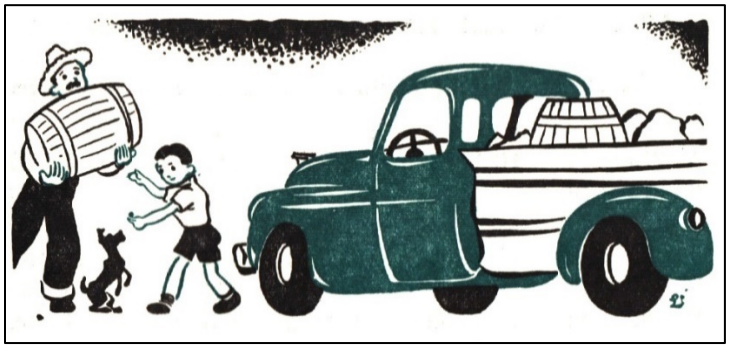

**Illustration 4.6: Boy helps man loading a truck, 1961**

*Source:* Both illustrations from: Ladouceur, J.-P. (1961). *Arithmétique 3e année*. Les Frères du Sacré-Coeur.

In the 2010s, other trends become apparent. Beyond the expanded use of illustration, stand-alone characters (illustration 4.7) become more common. Illustrations originating from stock image banks appear frequently. Compared to the illustrations produced in the 1960s, these stock illustrations tend to simplify the human figure significantly. Recurring characters, while already present in the 1960s, are more prevalent in the 2010s. The representation of women and girls also changes considerably: the direct link between the female figure and domestic work is abandoned, and women are represented as astronauts, scientists, and pirates.

**Illustration 4.7: Stand-alone characters in Math textbook, 2013**

*Source:* Both illustrations from Gallant, C., & Perron, D. (2013). *Multimathique: Mathématique : 3e année*. Éditions Grand Duc.

HISTORY TEXTBOOKS

Differently from the Math books, where the representation of male and female figures became almost equivalent between the 1960s and the 2010s, the History books remained constant in representing a minority of female figures, which can be observed in figure 4.5.

One point is worth mentioning about the collected sample: the main subjects of books from grades 3 and 4 of elementary education are the first inhabitants of Canada, pre-Colombian societies and the process of colonization. Due to this fact, the representation of Indigenous peoples is already present in the book from the 1960s. However, the historical facts present in the books are told through a white colonizer lens, which are represented in 78% of the human depictions. That changes in the 2010s, where Indigenous representations become the majority, even though the representation of white people is still considerable.

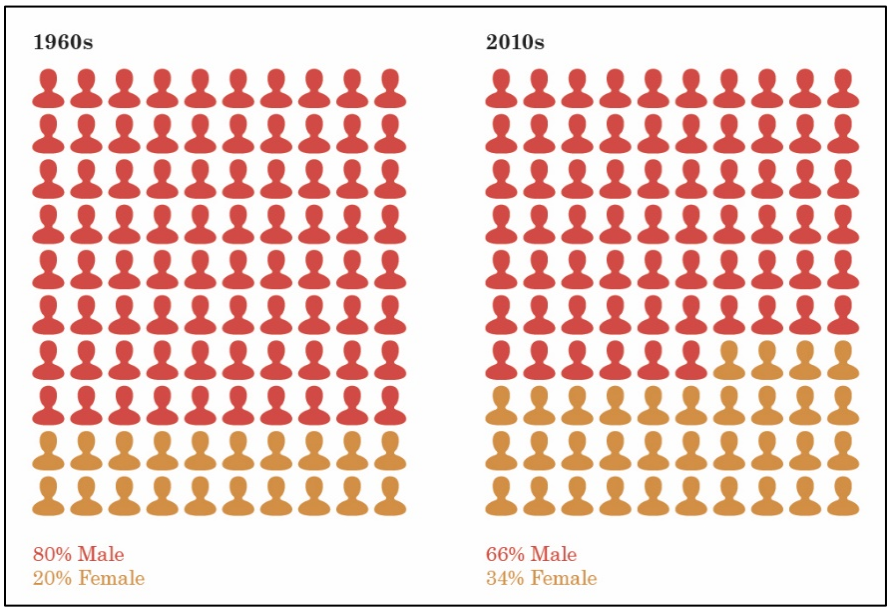


**Figure 4.5: Human Depictions by Gender – History Textbooks**

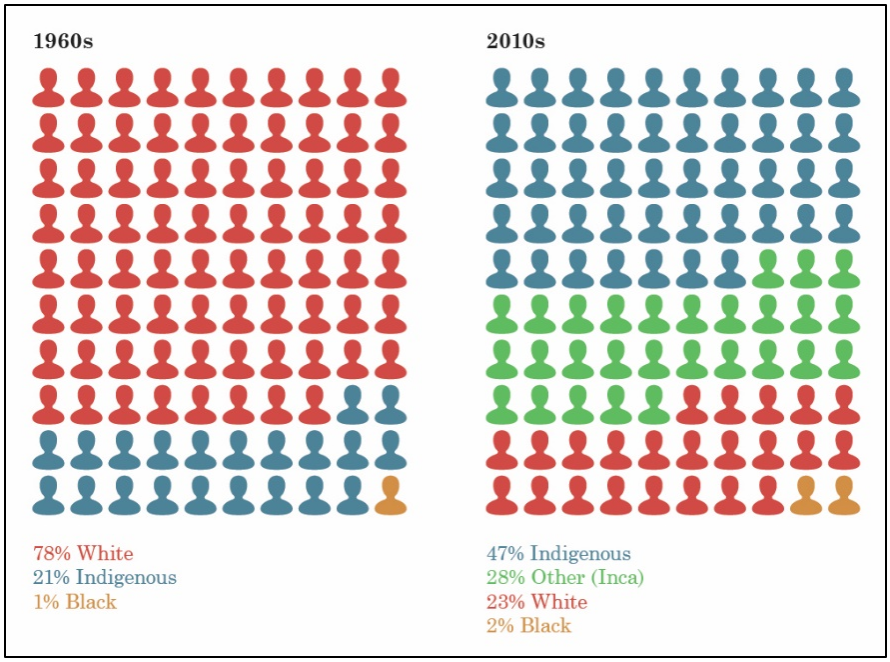


**Figure 4.6: Human Depictions by Ethnicity – History Textbooks**

Again, we can observe the strong presence of religion in the 1960s (illustration 4.9). The process of Indigenous religious conversion is thoroughly represented, and so are missionaries, priests, and bishops. Generally, Indigenous characters are only represented in relation to a white colonizer, and often represented as the enemy or as an obstacle to colonization (illustration 4.10). In the 2010s, Indigenous peoples are represented in relation to their own cultural context, and not only in relation to European colonizers.


**Illustration 4.8: Men observe colonizers setting up a cross, 1954**


**Illustration 4.9: Warriors battle colonizers, 1954**

Source: Both illustrations from Allaire, G.-H. (1954). *Grandes figures et grands faits, Histoire du Canada, troisième année*. Les Clercs de Saint-Viateur.


**Illustration 4.10: Family inside a *Wigwan*, 2012**

Source: From Fortin, S., & Loyer, C. (2012). *Panache: Géographie, histoire et éducation à la citoyenneté, 3e année*. Chenelière-Éducation.

## WHAT IS NOT THERE

Analyzing the data might give the impression that some sort of evolution occurred. Indeed, the pronounced predilection for representing only white males as characters in textbooks seems to have diminished, even if just a little.

Nonetheless, the problem with a quantitative analysis is that it is unable to show the people who are missing altogether from textbooks. Also, when analysing one variable at a time,

intersectional identities, which are relevant when talking about oppressed groups, remain invisible. Intersectionality refers to groups who are subjected to multiple levels of oppression, rendering them and their needs even more neglected by society (Crenshaw, 1989).

In terms of gender, even though there seems to be a trend towards a more balanced representation between females and males, which is a good trend in itself, textbooks seem to ignore the complexity of gender and focus on stereotypical and fully binary representations of gender, as shown in figure 4.7.

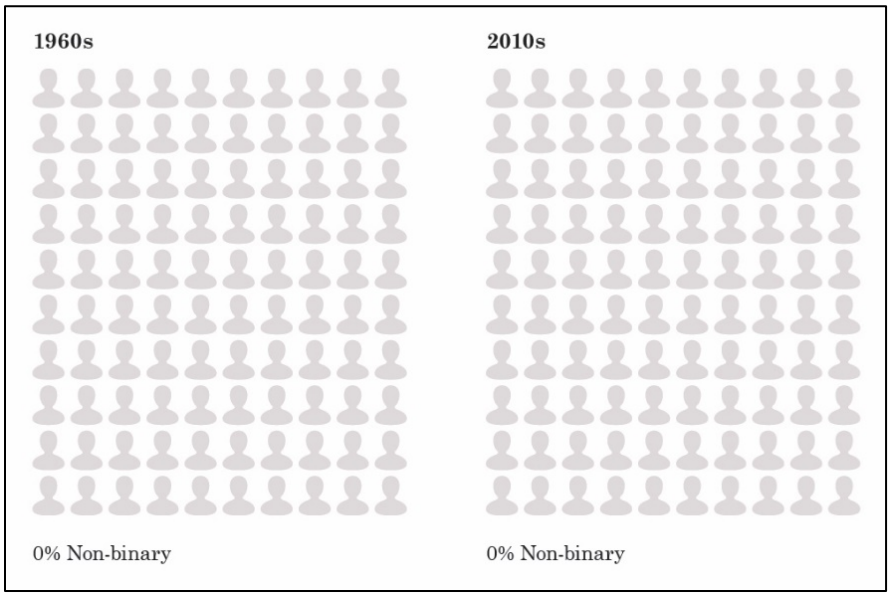


**Figure 4.7: Representation of Gender in Québec's Textbooks**

In the 1960s, as mentioned before, there are several illustrations that show how the Catholic church had a strong participation in the population's daily lives. In the 2010s, this is not present, nor any other depiction that could indicate the presence of people affiliated to any sort of organized religion, as seen in Figure 4.8.

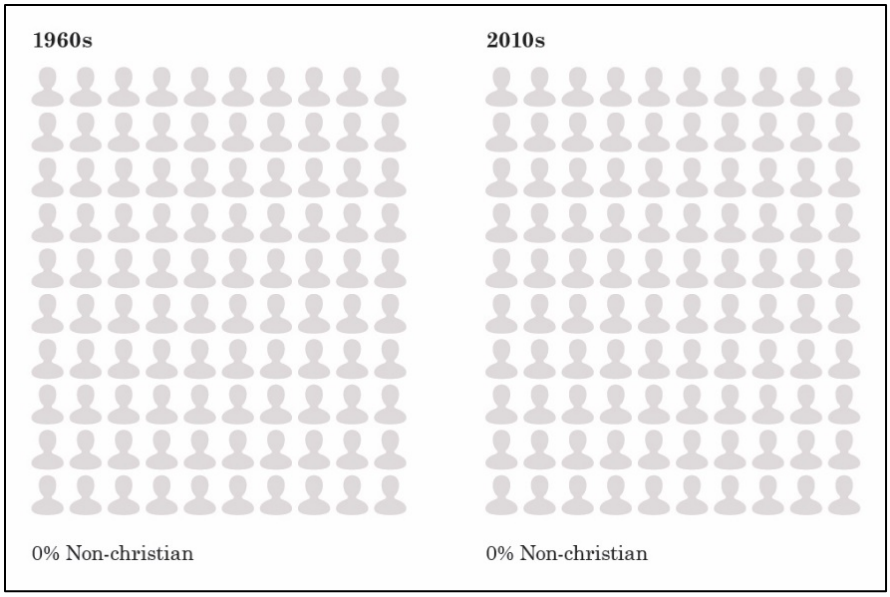


**Figure 4.8: Representation of Religion in Québec's Textbooks**

While there seems to be a diversification of ethnicities in the 2010s, the ethnic groups represented are restricted to White, Black, Indigenous, and Asian. Some groups, even though they account for a considerable part of Québec population, were not represented at all in the sample. Those groups include Latin Americans, South Asians, and Middle-Eastern (figure 4.9).

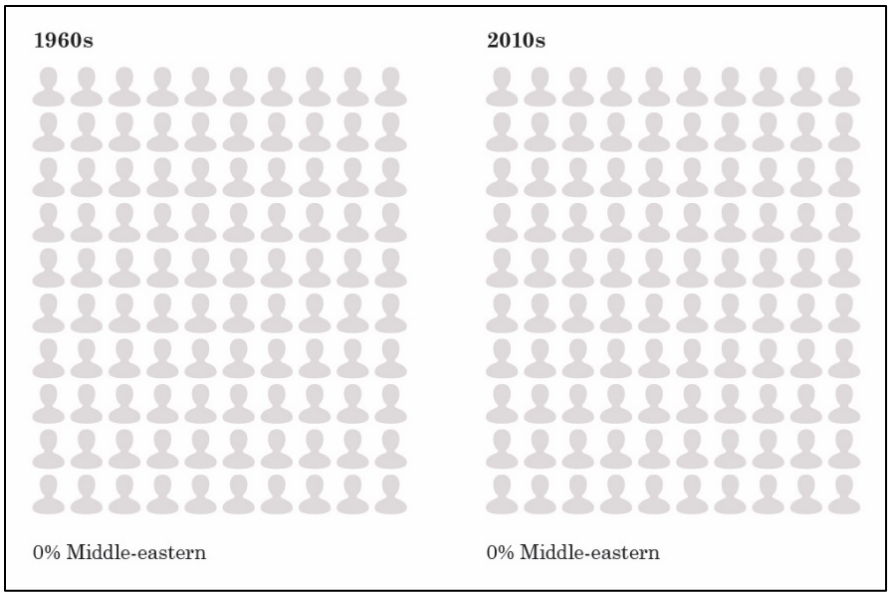


**Figure 4.9: Representation of Middle-Eastern People in Québec's Textbooks**

Another gap worth mentioning is the lack of diversity of bodies in the illustrations. Diversity of weight, height and disability (figure 4.10) is not present in the textbooks in the sample.

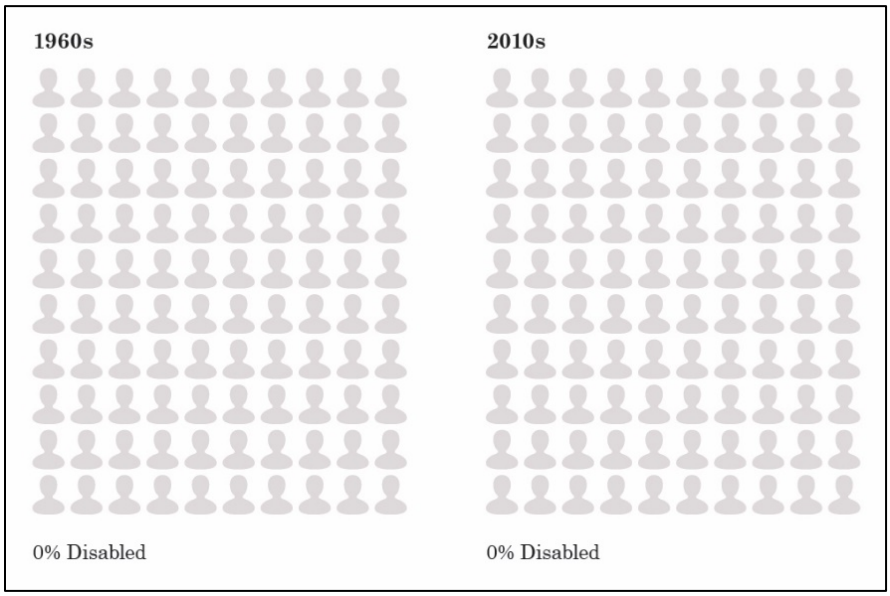


**Figure 4.10: Representation of Disability in Québec's Textbooks**

# CHAPTER 5: CONCLUSION AND REFLECTIONS

The data collected for this study show that there was a change in the way illustration is used in textbooks in the province of Québec. Nonetheless, it is not possible to say that these illustrations are perfectly aligned with the composition of society. Even though in the 2010s we saw a slightly larger representation of ethnic diversity and a greater balance between male and female figures, the tendency is still to represent white able-bodied men in most illustrations.

As I discussed in the previous sections of this project, the government of Québec is still struggling to create a truly inclusive educational system in the province, which inevitably translates into the educational imagery offered to students. Even though there are inclusion policies in place, they are either ignored by school boards or overall ineffective.

As Kirmayer highlights, Quebec exhibits a process of elevating one group as dominant, which is not only related to demographic facts, but especially to the distribution of power, which dictates social status (2019, p. 1123). By placing Québec's French-colonial tradition as "the" original culture in need of protection, the dominant cultural majority finds a subterfuge for creating mechanisms of oppression in the name of cultural preservation. This "threat" is, at the very least, dubious, considering how it tends to ignore Indigenous peoples and other non-French peoples that have been established in Québec's territories for centuries.

This double-edged tactic of "oppression for protection" can be connected to Paulo Freire's concept of Sectarianism. If, in Freire's terms, the underrepresented groups figure as the "oppressed", then the dominant culture in Québec is the "oppressor":

> Sectarianism, fed by fanaticism, is always castrating. Radicalization, nourished by a critical spirit, is always creative. Sectarianism mythicizes and thereby alienates; radicalization criticizes and thereby liberates (Freire, 2000, p. 37).

In these dynamics, there is a division in Québec between "us" and "them", in which social integration is dictated by how willing "they" are to incorporate "our" modes of living. Kirmayer explains this even further:

> The social process of collective identification that creates ethnic majorities and minorities occurs in social spaces that mark the boundaries of belonging in terms of sameness and difference. This sameness is usually taken for granted but, when exposed by confrontation with those viewed as Other, reasserts itself in rhetoric about the historical, natural, or necessary foundation of civil society and the collective order. The Other serves to define the Same even while (or especially because) the Other is viewed as posing a potential threat to civil order that must be managed and contained (2019, p. 1123).

We can see signs of Québec's Sectarianism in recent events, when Québec Premier François Legault denied the existence of systemic racism in the province ('What Happened Was "not Acceptable," Legault Says,' 2020). The denial of mechanisms of oppression contributes to nothing but the perpetuation of cycles of oppression. The problematic is accentuated by the fact that systems of inclusion (like education and immigration organizations) are controlled by

governmental institutions, subject to an ideological agenda that often stems from oppressive systems:

> Pedagogy which begins with the egoistic interests of the oppressors (an egoism cloaked in the false generosity of paternalism) and makes of the oppressed the objects of its humanitarianism, itself maintains and embodies oppression. It is an instrument of dehumanization. This is why, as we affirmed earlier, the pedagogy of the oppressed cannot be developed or practiced by the oppressors (Freire, 2000, p. 54).

How can a minority be included in a society if they have little say in their own process of insertion in society? Québec's approach to immigration has been one of integration, rather than inclusion (highlighted by the name of the responsible agency – *Ministère de l'Immigration, Francisation et Intégration*). In another interpretation, this is as if the oppressed can only find their way in society by subscribing to the oppressor's methods of integration, which, even if not on purpose, are seldom in favour of the oppressed. And as long as the oppressed refuses to follow the oppressor's ways of integration, they are marginalized. Freire rejects this idea:

> The truth is, however, that the oppressed are not 'marginals,' are not people living 'outside' society. They have always been 'inside'—inside the structure which made them 'beings for others.' The solution is not to 'integrate' them into the structure of oppression, but to transform that structure so that they can become 'beings for themselves' (2000, p. 74).

Another recent event that foregrounds this power dynamics is the approval, in June 2019, of the infamous *Loi 21*, which bans public employees in positions of authority (including teachers) from wearing religious symbols (Shingler, 2019). This type of initiative sends a message that citizens who wear religious symbols are "outside" society and have to integrate for the sake of others in order to be accepted. The mechanism of oppression is clear here, since "[a]ny situation in which 'A' objectively exploits 'B' or hinders his and her pursuit of self-affirmation as a responsible person is one of oppression" (Freire, 2000, p. 55).

Those situations show clearly that there is one segment of Québec's society whose ideals, aspirations, and cultural traits are preferred over others. There is an ongoing process of othering some segments of society, which in turn lose their space from public and community life, unable to understand and express their own needs and aspirations, thus maintaining the systems of oppression in place.

As designers, we have to understand how the work we produce is being used to sustain those oppressive processes, and what societal and moral entanglements are bound up with our design decisions. A few scholars have pointed out the problems related to the lack of representation in educational media, as will be discussed in the following section.

When looking at data such as the set collected in this research, designers need a more critical positioning. Beyond raw numbers, the way these images were created and the oppression dynamics behind them must be taken into consideration. In the particular case of Québec, there are many cultural, political, and societal tensions surrounding the themes of cultural identity, colonization and immigration, which makes it almost impossible to achieve a fully inclusive representation of the many groups that contribute to the province in an organic way. One of the

reasons that could explain this is Québec's interculturalist (as opposed to multiculturalist) approach to education, which can lead to the province's reluctancy to embrace more far-reaching inclusiveness policies due to a perceived threat to Québec's French-colonial identity. This is one opportunity for future investigations.

Of course, this problem is not exclusive to Québec and other countries present solutions that can help with the issue of lack of diversity in textbook illustration. Brazil, my home country and where I started my textbook design practice, already has policies in place to minimize that. The MEC (*Ministério da Educação e da Cultura* – Brazil's Ministry of Education and Culture) establishes rigid criteria when it comes to the production (and its subsequent purchase by governmental institutions) of textbooks. The public notice for publishers to offer their textbooks for public schools is regulated by the PNLD (*Programa Nacional do Livro Didático* – National Program for Textbooks), which institutes a series of parameters that must be respected. Non-comliance to those criteria bars the textbook from being sold to the public system. Section 3.1.5.2 of the public notice for the 2019 competition explains in detail how illustrations in the textbook will be evaluated (Ministério da Educação, 2017). Item d. of this section specifically demands that illustration "must depict adequately ethnical diversity of the Brazilian population, social plurality and cultural manifestations". In consequence, Brazilian illustrators, designers, and art directors that work with education are already conditioned to include themes of diversity in their practice, since textbooks with homogeneous ethnic representations will certainly be rejected. This practice is one example of the ways other governments are addressing the theme of diversity and is one that could be implemented by the government of Québec.

However, we, designers, as stakeholders in the production of products like textbooks, which work as both a reflection and a transforming agent of society, also have the power to identify and interfere directly in the processes and outcomes that generate representations that show a distorted version of society. Even if the society in which we operate still needs fundamental changes to reach an inclusive state, it is our duty to acknowledge our active role in the systems of oppression and actively do our best as not to perpetuate them. It is also our duty to bring as many oppressed voices as possible to spaces where design is produced: either as clients, content producers, designers, or decision-makers. All the while avoiding the paternalistic or benevolent approach and helping to empower underrepresented people so they are able to tell their own stories, on their own terms.

The notion of design as a purely aesthetic practice, or even as a manufacturing practice is beyond outdated and serves little purpose to this time in history. There can be no "assumption of exemption" because designers are generally relegated to the end of the editorial (among others) process. Design Thinking has already claimed design's space in the beginning of the process, and new design scholarship is now claiming the space of design outside capitalism (Wizinsky, 2019). Design can and should exist beyond the realm of products and production. Our place is everywhere. Our work is everywhere. And with this notion, comes a responsibility to respectfully serve our society.

Designers do so much more than just sell stuff. We enlist people to wars. We bring down governments. We make people sick. We spread misinformation. We exclude people from society based on their origins, their gender, their colour, their religion, their bodies. However, we also empower democracies. We tell new stories. We make people healthy. We educate. And we can also include people.

Hopefully, this project will open possibilities for new lines of research on the subject, which address not only issues such as ethnic diversity and gender equality, but also the diversity of body compositions, disability, age, family composition and sexuality. Not only that, but other decades must be investigated in depth so that one can understand how this process of change took place.

Moreover, it is not enough to analyze the number of people belonging to marginalized groups, but, together with these groups, to make a deeper analysis of how they are being represented. Are there representations that honor them, without prejudice and stereotypes? There is a need for several layers of design-related changes in order to create meaningful change in the way a society is portrayed in textbook illustration.

The textbook, the ever-so-faithful witness of our times, is just the starting point of deeper and more meaningful conversations about the power of design in society, and especially in education. When we look at Québec's textbooks in the next few years, what is the society that we would like to see reflected back at us?

# REFERENCES

## TEXTBOOK SAMPLE


Allaire, G.-H. (1954). *Grandes figures et grands faits, Histoire du Canada, troisième année*. Les Clercs de Saint-Viateur.

Allaire, G.-H. (1967). *Découvreurs et pionniers, Histoire du Canada, 4e et 5e années*. Éditions du Renouveau Pédagogique.

Beaudry, G., Saboutin, A., Levasseur, R., & Demers, M.-J. (1965). *Le Cacul Vivant, Arithmétique 3e année*. Centre de Psychologie et de Pédagogie.

Bergeron, C., & Sauvageau, K. (2014). *Caméléon, classe branchée: Mathématique, 3e année*.

Bernier Cormier, M.-È. (2013). *Escales: En Nouvelle-France : 4e année du primaire*. ERPI ; Pearson.

Brisson, J. (1966). *Calculer C'est Amusant 2*. Les Éditions Julienne.

Daigneault, L. (1960). *Ils ont fait notre pays, Histoire du Canada, Manuel de 3e année*. Les Frères des Écoles Chrétiennes.

Deshaies, I., & Bessette, C. (2012). *Tam tam: Mathématique, 3e année*. Pearson ; ERPI.

Fortin, S., & Loyer, C. (2012). *Panache: Géographie, histoire et éducation à la citoyenneté, 3e année*. Chenelière-Éducation.

Gallant, C., & Perron, D. (2013). *Multimathique: Mathématique : 3e année*. Éditions Grand Duc.

Ladouceur, J.-P. (1961). *Arithmétique 3e année*. Les Frères du Sacré-Coeur.

Samuel, C., & Vendette, C. (2011). *Signes des temps: 3e année*. Centre éducatif et culturel.

Séguin, R., Côté, L., Côté, R., Deschamps, A., & Lacroix, L. (1968). *L'univers des nombres 3 (édition du maître)*. Holt, Rinehart et Winston.

Vaillancourt-Stanhope, A., Bélanger, G., & Perron, D. (2010). *Au programme... En mathématiques*: 3 année. Éditions Grand Duc.

## WORKS CITED


Aubin, P., Allard, M., Bassil, S., Lebrun, M., & Bibliothèque et Archives nationales du Québec (Eds.). (2006). *300 ans de manuels scolaires au Québec*. Bibliothèque et Archives nationales du Québec ; Presses de l'Université Laval.

Bailey, F. A. (1991). The Textbooks of the 'Lost Cause': Censorship and the Creation of Southern State Histories. *The Georgia Historical Quarterly*, *75*(3), 507–533.

Berman, D. B. (2013). *Do Good Design: How Design Can Change the World* (2nd ed.). New Riders in association with AIGA Design Press.

Bishop, R. S. (1990). Mirrors, Windows, and Sliding Glass Doors. *Perspectives: Choosing and Using Books for the Classroom*, *6*(3). https://scenicregional.org/wp-content/uploads/2017/08/Mirrors-Windows-and-Sliding-Glass-Doors.pdf

Bromley, P. (2014). Legitimacy and the Contingent Diffusion of World Culture: Diversity and Human Rights in Social Science Textbooks, Divergent Cross-National Patterns (1970-2008). *Canadian Journal of Sociology*, *39*(1), 1–44.

Brown, T. (2009). *Change by design how design thinking transforms organizations and inspires innovation*. HarperCollins. http://banq.lib.overdrive.com/ContentDetails.htm?id=1E4441D9-FC50-48D7-B4B3-7A63E0A1A7F1

Campbell, C., & Jane, B. (2012). Motivating children to learn: The role of technology education. *International Journal of Technology and Design Education*, *22*(1), 1–11. https://doi.org/10.1007/s10798-010-9134-4

Clarke, A. J. (2015). Émigré Culture and the Origins of Social Design. In V. Margolin, A. Brillembourg Tamayo, A. Fuad-Luke, P.-P. Verbeek, G. Julier, A. J. Clarke, M. Bruinsma, I. van Zijl, & Stichting Utrecht Biënnale (Eds.), *Design for the good society*. EElco van Wilie, nai010 publishers.

*Creative Earners: 2018 / 2019 Results of the Canadian survey of salaries and billing practices in the communication design industry* (p. 52). (2019). RGD.

Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. *University of Chicago Legal Forum*, *1989*(1). http://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8

*Design Census 2019*. (2019). https://designcensus.org

Després-Poirier, M. (1995). *Le système d'éducation du Québec* (2nd ed.). Gaëtan Morin Éditeur.

Dickinson, J. A., & Young, B. J. (2003). *A short history of Quebec* (3rd ed). McGill-Queen's University Press. https://archive.org/details/shorthistoryofqu0000dick_z9p8/page/372/mode/2up

*"Diversity is Canada's Strength"*. (2015, November 26). Prime Minister of Canada. https://pm.gc.ca/eng/news/2015/11/26/diversity-canadas-strength

Fernandes, T. (2020, January 3). Bolsonaro chama livros didáticos de 'lixo' e propõe que material seja suavizado em 2021. *Folha de S.Paulo*. https://www1.folha.uol.com.br/cotidiano/2020/01/bolsonaro-chama-livros-didaticos-de-lixo-e-propoe-que-material-seja-suavizado-em-2021.shtml

Fortier, M. (2019, March 18). Incursion dans les écoles de l'État islamique. *Le Devoir*. https://www.ledevoir.com/societe/education/550089/incursion-dans-les-ecoles-de-l-etat-islamique

Frascara, J. (2016). Data, Information, Design, and Traffic Injuries. In *On information design* (pp. 53–72). The Museum of Architecture and Design : Društvo Pekinpah. http://www.dlib.si/stream/URN:NBN:SI:doc-2N1R3N8A/8475a930-3883-43a1-b3d0-2a97bca66fea/PDF

Freire, P. (2000). *Pedagogy of the oppressed* (30th anniversary ed). Continuum.

Government of Canada, S. C. (2019a, February 27). *Diversity of the Black population in Canada: An overview*. https://www150.statcan.gc.ca/n1/pub/89-657-x/89-657-x2019002-eng.htm

Government of Canada, S. C. (2019b, June 21). *Statistics on Indigenous peoples*. https://www.statcan.gc.ca/eng/subjects-start/indigenous_peoples

Guo, D., Wright, K. L., & McTigue, E. M. (2018). A Content Analysis of Visuals in Elementary School Textbooks. *The Elementary School Journal*, *119*(2), 244–269. https://doi.org/10.1086/700266

Hall, P. (2017). Bubbles, Lines and String: How Visualisation Shapes Society. In T. Triggs & L. Atzmon (Eds.), *The Graphic Design Reader*. Bloomsbury Visual Arts.

Horkheimer, M., & Adorno, T. W. (1972). *Dialectic of enlightenment*. Herder and Herder.

Im, H., Hokanson, B., & Johnson, K. K. P. (2015). Teaching Creative Thinking Skills: A Longitudinal Study. *Clothing and Textiles Research Journal*, *33*(2), 129–142. https://doi.org/10.1177/0887302X15569010

Immigration, Diversité et Inclusion Québec. (2018a). *Immigration, Diversité et Inclusion Québec—A society enriched by its diversity*. http://www.immigration-quebec.gouv.qc.ca/en/living-quebec/common-values/society-diversity.html

Immigration, Diversité et Inclusion Québec. (2018b). *Immigration, Diversité et Inclusion Québec—Men and women have the same rights*. http://www.immigration-quebec.gouv.qc.ca/en/living-quebec/common-values/men-women-rights.html

Jeunes issus de l'immigration: État des connaissances et portrait montréalais. (n.d.). *Réseau réussite Montréal*. Retrieved 25 August 2020, from https://www.reseaureussitemontreal.ca/dossiers-thematiques/jeunes-issus-de-limmigration/

King, M. T. (2016). Working With/In the Archives. In S. Gunn & L. Faire (Eds.), *Research Methods for History* (2nd ed., Vol. 1–Book, Section, pp. 15-15–30). Edinburgh University Press.

Kirmayer, L. J. (2019). The Politics of Diversity: Pluralism, Multiculturalism and Mental Health. *Transcultural Psychiatry*, *56*(6), 1119–1138. https://doi.org/10.1177/1363461519888608

Koss, M. D. (2015). Diversity in Contemporary Picturebooks: A Content Analysis. *Journal of Children's Literature*, *41*(1), 32-32–42.

Latour, B. (2008). A Cautious Prometheus? A Few Steps toward a Philosophy of Design (with Special Attention to Peter Sloterdijk) Keynote lecture for the Networks of Design meeting of the Design History Society. *Falmouth, Cornwall*.

Lopez, E. (2019). *Making Common* [Master of Fine Arts (MFA)].

Lowndes, C. (2017, October 25). *How Southern socialites rewrote Civil War history*. Vox. https://www.youtube.com/watch?v=dOkFXPblLpU

Martínez-Bello, V., & Martínez-Bello, D. (2016). Depictions of Human Bodies in the Illustrations of Early Childhood Textbooks. *Early Childhood Education Journal*, *44*(2), 181–190. https://doi.org/10.1007/s10643-015-0701-x

McAndrew, M. (2010). Immigration and Diversity in Quebec's Schools: An Assessment. In S. Gervais, C. Kirkey, & R. Janssens (Eds.), *Quebec Questions: Quebec Studies for the 21st Century* (p. 18). Oxford University Press.

McAndrew, M. (2012). L'éducation au Québec contribue-t-elle au développement d'une société équitable et inclusive? Les acquis et les limites. *Actes Du Symposium International Sur l'interculturalisme. Dialogue Québec-Europe.*

McCaffrey, M., & McCaffrey, C. (2017). Moving Beyond the Common Core Text Exemplars: A Need for Diversity. *Illinois Reading Council Journal*, *45*(3), 19–32.

McCoy, K. (2003). Good citizenship: Design as a social and political force. In S. Heller & V. Vienne (Eds.), *Citizen designer: Perspectives on design responsibility* (Vol. 1–Book, Section, pp. 2–8). Allworth Press.

Milne, L. (2013). Nurturing the designerly thinking and design capabilities of five-year-olds: Technology in the new entrant classroom. *International Journal of Technology and Design Education*, *23*(2), 349–360. https://doi.org/10.1007/s10798-011-9182-4

Ministère de l'Éducation. (2001). *Québec Education Program: Preschool Education—Elementary Education*. Gouvernement du Québec. http://www.education.gouv.qc.ca/en/teachers/quebec-education-program/elementary/

Ministério da Educação. (2017). *Edital de Convocação 01/2017– CGPLI – Edital de Convocação para o Processo de Inscrição e Avaliação de Obras Didáticas para o Programa Nacional do Livro e do Material Didático – PNLD 2019*. Ministério da Educação. http://www.fnde.gov.br/programas/programas-do-livro/consultas/editais-programas-livro/item/10521-pnld-2019

Noel, L.-A., & Liub, T. L. (2017). Using Design Thinking to Create a New Education Paradigm for Elementary Level Children for Higher Student Engagement and Success. *Design and Technology Education*, *22*(1), n1.

Papanek, V. (1985). *Design for the Real World: Human Ecology and Social Change*. Thames & Hudson.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Basic Books.

Shingler, B. (2019, September 5). 'Non à la loi 21' campaign launched against Quebec's religious symbols ban | CBC News. *CBC*. https://www.cbc.ca/news/canada/montreal/bill-21-campaign-non-a-la-loi-21-1.5271869

Simon, H. A. (1996). *The Sciences of the Artificial* (3rd ed.). MIT Press.

Statistics Canada. (2015, December 2). *Visible minority of person*. http://www23.statcan.gc.ca/imdb/p3Var.pl?Function=DEC&Id=45152

Statistics Canada. (2017a, October 25). *Ethnic and cultural origins of Canadians: Portrait of a rich heritage*. Census in Brief.

Statistics Canada. (2017b, October 25). *Immigration and ethnocultural diversity: Key results from the 2016 Census*. The Daily.

*The Global Gender Gap Report 2017*. (2017). World Economic Forum. http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

Twyman, M. (1985). Using Pictorial Language: A Discussion of the Dimensions of the Problem. In *Designing Usable Texts* (pp. 245–312). Elsevier. https://doi.org/10.1016/B978-0-12-223260-2.50016-5

What happened was 'not acceptable,' Legault says. (2020, September 29). In *CBC News*. CBC. https://www.cbc.ca/player/play/1797251651722

Williams, L. (2019). The Co-Constitutive Nature of Neoliberalism, Design, and Racism. *Design and Culture*, *11*(3), 301–321. https://doi.org/10.1080/17547075.2019.1656901

Wizinsky, M. (2019). *Design After Capitalism | AIGA Design Educators Community*. https://educators.aiga.org/design-after-capitalism/