

Single-use Plastic Consumption and the COVID-19 Pandemic:
Exploring the Social Dynamics of Consumption from a Practice-based Approach

Larissa Dorrestijn
1004443
8/10/2021

MSc Thesis Environmental Policy Group

Supervisors: dr. Mary Greene & dr.ir. Bas van Vliet



Abstract

With the consumption of single-use plastics (SUPs) becoming ever more present in our daily lives, the negative environmental impacts of their use must be reduced. The COVID-19 pandemic has further exacerbated single-use plastic consumption due to efforts to reduce virus transmission and changes in everyday life. Consequently, the aim of this thesis is to contribute to the sustainable consumption of SUPs by advancing understandings of the social dynamics related to this consumption during the COVID-19 pandemic. So far, social-psychological and structural approaches have not resulted in the necessary change that is required to reduce the environmental impact of our SUP consumption, and therefore, this thesis approaches this topic from a social practice perspective.

Through the completion of 24 interviews and 11 sets of diary entries with a total of 12 individuals, all located in Calgary, Canada, this thesis explores the SUP consumption that occurs in three exemplary practices (grocery shopping, takeout, and ‘getting coffee’) and how this has been impacted by the pandemic. The results of this exploratory research show that there are many social dynamics at play in practices of SUP consumption. The dynamics evident from this data are: the timing and reasoning of each situational setting in which a practice occurs, the convenience of using SUPs, socializing, the expression of environmental intent relating to the substitution and reuse of SUPs, household dynamics, risk aversion, the disposal of SUPs, and the impact of policy. Relating to the COVID-19 pandemic, the pandemic has impacted the frequency at which practices are performed, has increased risk aversion in everyday life, has changed aspects of socializing in practices, and has even introduced the new practice of mask wearing. Moreover, the policies implemented by governments changed the daily life of participants but did not directly impact SUP consumption. Contrarily, policies implemented by private businesses impacted SUP consumption directly. Given these results, this research found that the above social dynamics cannot be generalized to increase or decrease SUP consumption. However, this thesis provides a detailed account of how SUPs are consumed in everyday activities, creates a foundation for future research on practices of SUP consumption, and a starting point for policymakers in creating inclusive social policy.

Table of Contents

Abstract	i
Table of Figures	v
Table of Tables	v
Acknowledgements	vi
1. Introduction: A Research Project on Single-use Plastic Consumption During the COVID-19 Pandemic	1
1.1. Introduction	1
1.2. The State of Single-use Plastics	1
1.3. The COVID-19 Pandemic	2
1.4. A Social Practice Research Project	3
1.5. The Guiding Objectives and Research Questions	3
1.6. Calgary, Canada as the Home for this Project	5
1.7. Construction of the Thesis	6
2. Conceptual Framework	7
2.1. Introduction	7
2.2. The Sociology of Plastic Consumption	7
2.3. Social Practice Theory	9
2.3.1. Early Social Practice Theories	10
2.3.2. Defining SUP Consumption	11
2.3.3. Shove's Understanding of Practices	12
2.3.4. Spaargaren's Model for Studying Practices	13
2.3.5. Investigating Shifts in Practices	15
2.4. Tying it all Together into a Conceptual Framework	18
2.5. Conclusion	21
3. Methodology	22
3.1. Introduction	22
3.2. Epistemological and Methodological Underpinnings	22
3.3. Methods	23
3.3.1. Contextual Desk Research	23
3.3.2. Daily Practices Stream	24
3.3.2.1. Rationale for Research Instruments	24
3.3.2.2. A Serial Approach	25
3.3.2.3. Sampling	26
3.3.3. Piloting the Research Instruments	28
3.3.4. Ethical Considerations	28
3.3.5. What Constitutes a SUP and Why?	29
3.4. Data Analysis	29
4. Findings 1: The Local Context of Calgary	31

4.1.	Introduction	31
4.2.	COVID-19 in Calgary, Alberta, and Canada	31
4.3.	SUPs in Canada and Calgary	34
4.4.	Disposal of Waste in Calgary.....	35
5.	Findings 2: What do Practices of SUPs Consumption Look Like?	38
5.1.	Introduction	38
5.2.	Mapping Practices of SUP Consumption.....	38
5.2.1.	Food Preparation and Food Storage	39
5.2.2.	Mobility.....	40
5.2.3.	Variations of Shopping	40
5.2.4.	Work.....	41
5.3.	Understanding SUP Consumption in Three Exemplary Practices	41
5.3.1.	Grocery Shopping	42
5.3.2.	Takeout.....	45
5.3.3.	Getting Coffee.....	47
5.4.	Convenience Enabled by SUPs	49
5.5.	Frequency and the COVID-19 Pandemic.....	51
5.5.1.	Risk Aversion.....	51
5.5.2.	COVID Fatigue: The Case of Takeout.....	53
5.6.	Emergence of a New Practice: The Face Mask.....	54
5.6.1.	Adjusting to Wearing Masks.....	54
5.6.2.	Standards of Properly Wearing a Mask	55
5.6.3.	Risk	56
5.6.4.	Waste.....	57
5.7.	Conclusion.....	58
6.	Findings 3: Lifestyles and SUP Consumption	59
6.1.	Introduction	59
6.2.	Meanings expressed in SUP Consumption	60
6.2.1.	Efforts to Improve SUP Consumption	60
6.2.2.	Dynamics of SUP Reuse.....	63
6.3.	The Role of Household Composition in SUP Consumption.....	65
6.4.	Lifestyles Expressed in Practices as a Response to COVID-19.....	67
6.4.1.	Normative Conduct	67
6.4.2.	Socializing.....	68
6.5.	Conclusion.....	71
7.	Findings 4: Consumer Perspectives on Systems of SUP Provision.....	72
7.1.	Introduction	72
7.2.	SUP Disposal.....	73
7.2.1.	Recycling as a Justification for SUP Consumption	74
7.2.2.	Weariness of Recycling Efficiencies	75
7.2.3.	Competencies and Confusion About Recycling	76
7.2.4.	Convenience in Disposal.....	77

7.3.	The Influence of COVID-19 Policies on SUP Consumption.....	80
7.3.1.	Government Policies	80
7.3.2.	Store policies and Reusable Materials	82
7.3.2.1.	Grocery Store Policies	82
7.3.2.2.	Café Policies	84
7.4.	Conclusion.....	85
8.	Discussion.....	86
8.1.	Introduction	86
8.2.	Embedding SUP Consumption in the Literature.....	87
8.2.1.	Socio-technical Perspectives on SUP Packaging: Enabling, Substitution, and History	87
8.2.2.	A Historical Perspective on the Shopping bag: Following the material	88
8.2.3.	The Recursive Relationship Between Systems of Provision and Practices	89
8.2.4.	Everyday Life in a Pandemic: A Study	90
8.3.	The Continual Impacts and Changes of the Pandemic.....	91
8.4.	Reflecting on the Conceptual Framework.....	92
8.5.	Reflecting on the Methodology.....	94
8.5.1.	The COVID-19 Pandemic, Timing, and Implementation of the Methods.....	94
8.5.2.	Positionality and Reflexivity.....	94
8.5.3.	Validities	95
8.6.	Potential Avenues for Future Research.....	96
9.	Conclusion	97
	References.....	100
	Appendices.....	108
	Appendix 1: Interview Guides and Diary Template	108
	Appendix 2: Interview Visuals.....	128
	Single-use Plastic Collage	128
	COVID-19 Policy Visuals.....	129
	Appendix 3: Information Sheet and Consent Form.....	133
	Appendix 4: Single-use Plastics.....	136
	Appendix 5: Final Coding Lists	137
	Coding list for Daily Practices Stream	137
	Coding list for Contextual Stream.....	140

Table of Figures

Figure 1.1 Map of Western Canada	5
Figure 2.1 The elements of a practice	12
Figure 2.2 A Social Practices model for studying consumption	14
Figure 2.3 Conceptual framework	19
Figure 3.1 A temporal scheme of the data collection period	25
Figure 4.1 COVID-19 Policy Timeline.....	33
Figure 4.2 A sample of a the “Quick Reference Guide” information sheet.....	36
Figure 5.1 SUP Consumption in practices	38
Figure 6.1 Lifestyles and SUP Consumption.....	59
Figure 7.1 Systems of Provision and Practices	72

Table of Tables

Table 2.1. A summary of how change in practices occurs.....	16
Table 3.1 Breakdown of participant characteristics	27

Acknowledgements

I could talk about single-use plastics all day. Anybody who has asked me about the topic of my thesis has (likely) heard my passion for the environmental issues related to single-use plastic consumption, and I hope this passion shines through when reading this thesis. Now that this project has come to a close, I would like to show my appreciation for the individuals who helped make this project what it is.

This project's participants deserve all the praise in the world; they selflessly gave up several hours of their time, and without them it would not have been possible to complete this study. You are the foundation of this project.

The guidance provided by my supervisors has been fundamental in shaping this project, but it has also shaped and matured my understanding of the (environmental) world around us. Mary Greene and Bas van Vliet – thank you!

My family and friends have endured the trials and triumphs of this project, and I hope you know how much I appreciate your continual support, because I will never be able to properly put my immense gratitude into words.

-This page is intentionally left blank-

1. Introduction: A Research Project on Single-use Plastic Consumption During the COVID-19 Pandemic

1.1. Introduction

If you were to be asked how much plastic you consume in a day, would you be able to answer with a (semi-)definite answer? How much of this plastic is only used once before it is thrown out? Upon searching for an answer, it is likely you would think about the various parts of your day such as shopping, travel, food preparation, and work. Now, how has this changed throughout the COVID-19 pandemic? Do you view or use plastics differently? This introduction chapter outlines why these questions are important and how this translates into the central problem that this thesis explores. The chapter begins by introducing single-use plastics and their consumption, the COVID-19 pandemic, and social practice theory, in sections 1.2, 1.3, and 1.4, respectively. In section 1.5, it describes how these topics translate into the objectives and research questions that guide this thesis. The local context in which this research takes place is introduced in section 1.6 and, lastly, the chapter finishes off by outlining the structure of this report in section 1.7.

1.2. The State of Single-use Plastics

Single-use plastic (SUP), a plastic that is only used once before it is thrown out (UNEP, 2018), plays a central role in the present-day. Since the modern introduction of plastic into society, plastic production has increased by several orders of magnitude since the 1950s (Jambeck et al., 2015). Specifically, SUPs have replaced many expensive, heavy and reusable items (Geyer et al., 2017; UNEP, 2018). However, the disposal of plastic has resulted in issues of plastic waste entering aquatic and terrestrial environments (Bläsing & Amelung, 2018; Horton et al., 2017), negatively impacting some aquatic wildlife (Li et al., 2016; Sigler, 2014).

SUPs have made an arguably permanent mark on the world, and consequently, the environmental issues that have resulted from SUP consumption can, and are, no longer being ignored. Increasingly policy makers, corporations, and individuals are working to increase the sustainability of SUP consumption, as seen by the implementation of SUP bans and the plethora of initiatives coming from consumers and businesses (UNEP, 2018). However, the dynamics and discourse surrounding plastic's production, consumption, and its "blanket condemnation" (p.1) suggest that plastic's role in society is still being understood (Evans et al., 2020).

There is no shortage of research on SUPs. Previous literature has covered technical and social topics, and specifically, a plethora of social science research relating to the use of SUPs already exists (Heidbreder et al., 2019). Heidbreder et al. (2019)'s review of 187 publications found that research has been conducted on topics relating to the perceptions of plastic, determinants of behaviour, and solutions to the problem of plastic. Many of these studies are situated in individualistic theories such as the theory of planned behaviour. Though not without merit, approaches based on rationalistic, individualistic, and psychological theories have not resulted in large environmental change. According to Geels et al. (2015) this is because these approaches often result in incremental change that does not deviate from the status quo, and because these

theories fail to fully integrate social structures due to their focus on individual choice and behaviour. Specifically, behaviour-based approaches commonly run into several hurdles: “1) perceived practicability and convenience in the consumption context, 2) lack of knowledge on how to implement alternatives or lack of opportunities, 3) strong habits, and 4) shift of responsibility” (Heidbreder et al., 2019, p. 1087). In studying the social dynamics of SUP consumption, this research hopes to overcome some of these hurdles by taking a different, practice-based, approach as will be discussed in section 1.4.

1.3. The COVID-19 Pandemic

Taking the world by storm in 2020, the COVID-19 pandemic is a major disruptive event that has changed how daily routines and activities are performed, has introduced many new policies and restrictions, and has further exacerbated issues related to plastic consumption. The COVID-19 pandemic offers a unique opportunity to study a dramatic shift in how daily activities are performed and the implications this has for sustainable SUP consumption. It also offers an interesting and important learning opportunity for understanding the impact of large, disruptive events.

Due to the pandemic, plastics that were once only used in healthcare settings, such as disposable face masks and gloves, are making their way into everyday life as a result of anxiety about contracting the virus and the perceived safety these items provide (Patrício Silva et al., 2021). According to Patrício Silva et al. (2021), the use of other SUPs, such as plastic packaging, is also increasing due to the belief that they reduce contamination and that plastic packaged items have a longer shelf-life. Moreover, large coffee chains and select grocery stores in North America went so far as to temporarily disallow shoppers from bringing their reusable cups and bags, respectively, in order to reduce the chances of contagion (Cunningham, 2020; Shah, 2020). While some environmental impacts were reduced as many cities went into lockdown, for instance air pollution (Saadat et al., 2020), Patrício Silva et al. (2021) argue that these impacts are only momentarily postponed, and that short term increases in negative environmental impacts, such as increased plastic consumption, could intensify their long-term effects. In addition, research has revealed that the virus can survive longer on plastic than on other materials (Kampf et al., 2020; van Doremalen et al., 2020), highlighting a disconnect between the results of scientific studies and social behaviour. Furthermore, the change in SUP use seen throughout the pandemic suggests that the social dynamics and meanings around SUP consumption are shifting.

Research on the topic of plastic consumption during the COVID-19 pandemic has focused on the disintegration of single-use face masks into microplastics (Morgana et al., 2021; Shen et al., 2021), and issues of waste management (Klemeš et al., 2020; Patrício Silva et al., 2021; Prata et al., 2020). What these studies miss though, is how plastics are used in daily life, and how this is changing as a result of the pandemic. While one study has focused on opinions of plastic food packaging during the pandemic (Kitz et al., 2021), to my knowledge, the social dynamics of plastics consumption during the pandemic has not been explored to a large extent. As such, this research studies the impact of the COVID-19 pandemic on the social dynamics of SUP consumption and, thus, provides an opportunity to advance research on social topics of plastic use during the pandemic. It is in the context of the COVID-19 pandemic that I study SUP consumption practices; because the disruption caused by the pandemic provides an opportunity to shed light on SUP consumption

during a time with many changes. This can foster a more in-depth understanding of SUP consumption. Moreover, the theoretical perspective that shapes this research is rooted in the social practice theory paradigm.

1.4. A Social Practice Research Project

A social practice theory perspective offers an opportunity to shift away from the more dominant technical, social-psychologic, and structuralist theories that are often used in consumption research. This perspective shifts focus from the individual towards the practice, aiming to be more inclusive of social dynamics such as social norms of proper conduct and the elements making up a practice (i.e., the competencies, materials, and meanings) (Shove et al., 2012), lifestyles and systems of provision (Spaargaren & van Vliet, 2000), and local contexts. Social practice theory has roots in the later decades of the 1900s (Reckwitz, 2002), but has more recently moved from theoretical discussion to empirical application in the discipline of consumer studies (Corsini et al., 2019). The social practice perspective, and how it forms the conceptual foundation for this research, is further discussed in Chapter 2, but I discuss here its merit for conducting research on SUP consumption.

While practice-based research has expanded into the realm of sustainable consumption, to date I am only aware of three papers that focus on plastic consumption from this perspective (see Evans et al. (2020), Hagberg (2016) and Sattlegger et al. (2020)). This nascent work reveals the potential of a practice approach for studying SUP consumption because it highlights the possibilities to relate plastic materials to daily routines (Sattlegger et al., 2020), the agency of plastics in transforming and being transformed by practices (Hagberg, 2016), and the intersection of sociotechnical impacts and practices of plastic consumption (Evans et al., 2020). However, given the prevalence of plastic in contemporary society, more work in this field is needed, and as such, this project builds on the work of the authors above by exploring the social dynamics of SUP consumption. This includes studying the practices in which SUP consumption occurs, the role of, and services enabled by, SUPs in daily practices (Evans et al., 2020), and the impact of the COVID-19 pandemic on these practices.

Applying social practice theory to this research on SUP consumption has both theoretical and practical merit. Theoretically, social practice theory has not been largely applied to plastic consumption, leaving plenty of opportunity to further the empirical application of the theory. Practically, social practice theory can facilitate improvements in the sustainability of SUPs by better educating policy initiatives. Deviating from behaviourist or economic approaches to policy, a practice perspective brings attention towards the social contexts of action, for example, how the consumption of SUPs enables the performance of daily practices and the key social processes that are affected by changes in SUP consumption. Such a perspective will offer insights into the changing importance and embeddedness of SUPs in society.

1.5. The Guiding Objectives and Research Questions

Given the preceding discussion on SUP consumption, the COVID-19 pandemic, and social practice theory, I now come to the central objectives and questions of this research. As such, the central objective of this research is:

1. To contribute to the sustainability of SUP consumption by advancing understandings of the social dynamics shaping the use of SUPs in everyday consumption practices during the COVID-19 pandemic.

Here, ‘social dynamics’ refers to the dynamics of a practice such as: social norms and standards of conduct, local and policy contexts (including governing frameworks), social demographics, and the performance of routines in everyday life.

Accordingly, to better understand the “norms and practices that maintain the role of plastic in society” (Nielsen et al., 2020, p. 14), the sub-objectives of this research are:

1. To explore daily practices that use SUPs and how SUPs are integrated into these practices.
2. To improve the understanding of the impact of the COVID-19 pandemic on these practices, and relatedly, the changing social dynamics associated with SUP consumption.
3. To gain insight into the impact of socio-cultural contexts on daily practices that use SUPs.

These objectives can then be translated in the research questions which guide this research. In relation to the above-mentioned objectives, the main research question is:

1. *How do social dynamics shape the use of SUPs in everyday consumption practices and what impact has the COVID-19 pandemic had on these practices?*

To further structure this research, there are three guiding sub-research questions:

1. Which daily practices use SUPs and how is SUP consumption integrated into these practices?
2. How have these daily practices, and SUP consumption, changed as a result of the COVID-19 pandemic?
 - a. How have social dynamics and the elements constituting practices changed?
3. What impact did/do socio-cultural contexts and COVID-19 policies have on SUP consumption?

In answering the first sub-research question, practices of SUP consumption will come to light. The focus of the first sub-research question is on how these practices are aligned, how SUPs are integrated into these practices, and the enabling features of SUPs. The second sub-research question takes these ideas, and dives deeper into the impact of the pandemic on SUP consumption by focusing on how the performance and elements of practices (Shove et al., 2012) have changed, and how lifestyles and systems of provision (Spaargaren & van Vliet, 2000) have impacted this. It is important to note that throughout this thesis, phrases such as ‘the impact of COVID-19’ and ‘the impact of the COVID-19 pandemic’ are used interchangeably; both refer to the holistic impacts and changes seen by the pandemic, not only the challenges and issues related to the transmission of the COVID-19 virus. The third sub-research question situates the study into the local context of Calgary, Canada to detail the impact of policies and socio-cultural contexts on daily SUP consumption practices. Here the focus is to highlight how SUP consumption is situated in larger socio-cultural contexts and systems of provision. These three areas of focus bring together the main research question and will lead to an in-depth understanding of SUP consumption.

1.6. Calgary, Canada as the Home for this Project

This research locates itself in the city of Calgary, Canada. Calgary is located approximately 100 kilometers east of the eastern slopes of the Canadian Rocky Mountains in the province of Alberta (Figure 1.1). In 2016, Calgary was Canada's fourth largest census metropolitan area with a population of 1.4 million (Statistics Canada, n.d.) and is known for hosting the 1988 Winter Olympics. As such, the participants of this study all reside within the city, and therefore are impacted by the policies and decisions made by the municipal government (also referred to as The City of Calgary), the provincial government (named the Government of Alberta), and the federal government (the Government of Canada).

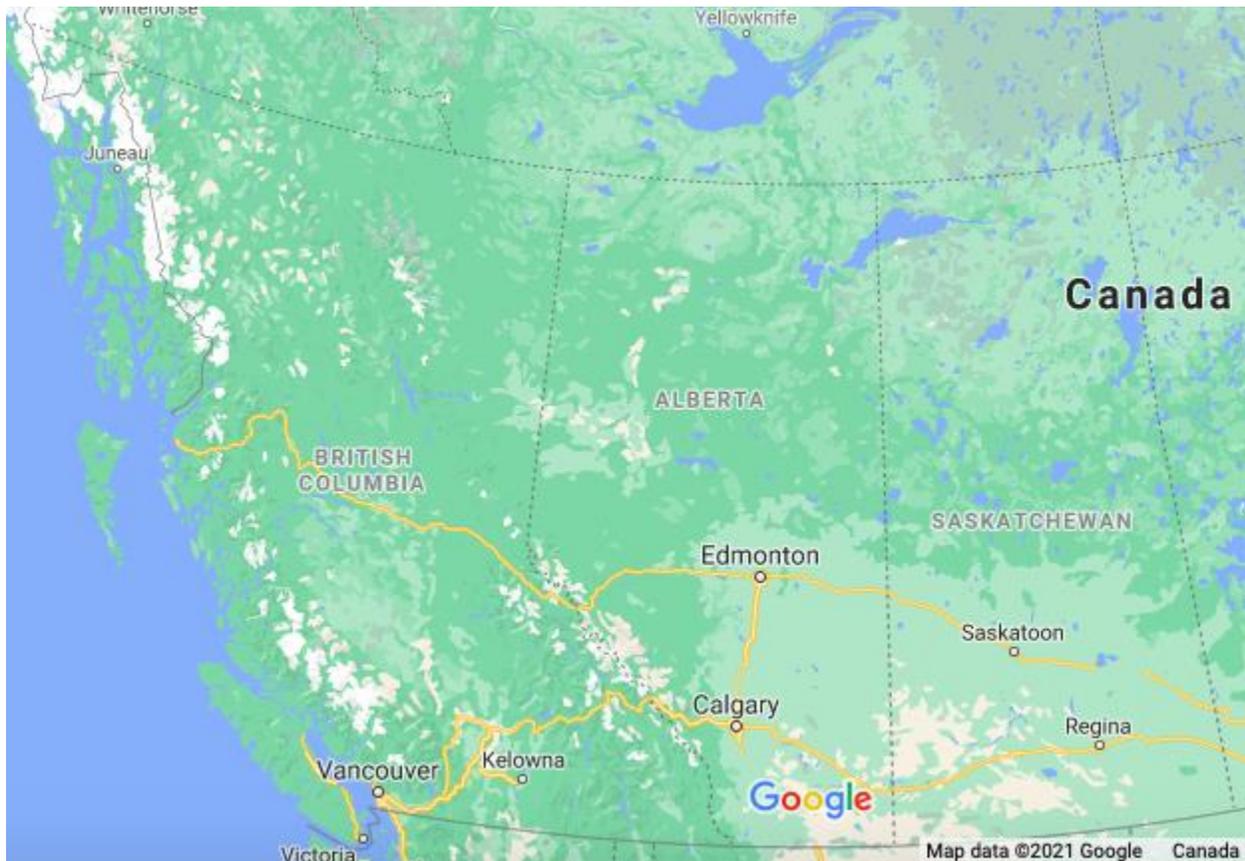


Figure 1.1 Map of Western Canada. Screenshot retrieved from (Google, n.d.).

The choice to conduct this project in Calgary is related to the COVID-19 pandemic. Due to travel restrictions, changes to daily life, and having grown up in the city, this research takes place in what I find the familiar setting of Calgary. As such, Calgary may not particularly stand out as a special area to conduct research, but this seemingly average local context is interesting, nonetheless. This is because social practice theory is underdeveloped in SUP consumption research and because Calgary's context can provide a knowledge base of information that can potentially be applied to other Canadian cities. For the readers who are not familiar with the city of Calgary, detailed contextual information is provided in Chapter 4 concerning the restrictions that have been implemented throughout the pandemic, local SUP policies, and local waste infrastructures.

1.7. Construction of the Thesis

Having introduced the topic and research problem of this thesis, I now turn to provide an outline for the rest of this report. The next two chapters set the groundwork for how this research was conducted. Specifically, Chapter 2 operationalizes the research questions by defining their key constructs and situating them in the larger bodies of literature on plastic consumption and social practice theory, while Chapter 3 shows how these constructs have been transformed into the measurable variables and methods of this research. Chapter 4 details the local context of Calgary to provide important background information to the reader and acts as a findings chapter for the secondary data collected, while Chapters 5-7 discuss the findings of the bulk of the primary data collected for this research. Lastly, Chapter 8 places these findings in a larger research context through discussion and Chapter 9 provides a conclusion by answering the research questions that guide this report.

2. Conceptual Framework

2.1. Introduction

In this chapter I will take the research questions that were introduced in the last chapter and begin to operationalize them through defining and explaining key constructs. From the research questions there are several key constructs that require definition and clarity, two of which already have been defined:

- *Social dynamics*
- *SUPs*

However, the following concepts require more clarity, and this is provided throughout this chapter:

- *SUP Consumption*: To define SUP consumption, previous literature on plastic consumption is discussed. Additionally, Alan Warde's influential work from 2005 will form the foundation for how consumption is defined within social practice theory.
- *Practices*: In this research, a 'practice' has a specific definition. I will discuss this, and the work of two prominent authors, Elizabeth Shove and Gert Spaargaren, to illustrate the different ways to study them.
- *Impact of the COVID-19 pandemic*: This study wishes to better understand the impact of the COVID-19 pandemic on SUP consumption, and therefore it is crucial to define the ways in which this impact may occur. This will be discussed by investigating how practices change overtime.

To understand these constructs it is important to define them within the theoretical and contextual understanding of this research project. To do so, I will first discuss relevant literature on plastic and plastic consumption. Then I turn to introduce social practice theory. After its introduction, I dive deeper into the theory by exploring important social practice literature, illuminating how the key constructs of this research are situated in the literature, and detailing how SUP consumption, and practices of SUP consumption, are shaped in this research. The last section of this chapter ties together the theoretical and empirical concepts discussed into the conceptual framework that is used throughout this thesis.

2.2. The Sociology of Plastic Consumption

There are several ways to classify research on sustainable consumption. For example, Geels et al. (2015) classify their research by ways of the reformist, revolutionary, and reconfiguration positions, Spaargaren (2011) chooses to use individualist and structuralist perspectives, Keller et al. (2016) synthesize research into categories of individual behaviour change, behavioural economics, social practices, and a technological approach, and Liu et al. (2016) separate research into economic, social psychological, and systemic and structuralist perspectives.

However, what these classifications have in common is that they are largely grounded in structuralist or social-psychological paradigms. In this section I provide a short review of the sociology of consumption and the theories underpinning it. Moreover, I loosely classify the theories above into two generalizations, psychological and structuralist perspectives. This is done by briefly explaining each, discussing how they comprehend and advocate for reducing the

environmental impacts of consumption, and by discussing how previous plastics research is incorporated into these perspectives. While the research on plastic mentioned below does not only focus on consumption it fits well into these classifications, nonetheless.

First, rationalist, psychological theories, such as the theory of planned behaviour, are premised on the ideas that the individual is a rational actor and that environmental change will occur as a result of individual changes (Spaargaren, 2011). These theories centralize behavioural intention and presume that behaviour will follow (Liu et al., 2016). However, pro-environmental intention and awareness often do not result in pro-environmental behaviours (Liu et al., 2016; Spaargaren, 2011), creating what is known as the value-action gap (Blake, 1999). Moreover, in these theories, the individual is the unit of analysis and interventions are aimed at changing individual behaviour (M. Keller et al., 2016; Shove, 2010; Spaargaren, 2011), externalizing any barrier to individual behaviour change into ‘variables’ such as habits, the environment, and social norms (M. Keller et al., 2016; Shove, 2010). Geels et al. (2015)’s interpretation of the reformist position has similarities to the psychological perspective, but they also include economic and technological aspects. With the addition of these aspects, the authors put more emphasis on technological efficiency, explaining that improvements in technologies and supply chain efficiencies are the key to positive environmental change, but argue that they still follow the same lines of individual behaviour change. As mentioned in the introduction chapter of this thesis, much social science research on plastics is based on these individualist behavioural theories, and while social practice theory argues that this hinders progress on sustainable consumption, there is a large amount of research that has been conducted on all sorts of behavioural aspects related to plastic (Heidbreder et al., 2019).

Other theories and approaches to sustainable consumption research take a more systemic and structuralist perspective. These approaches focus mainly on the effects of technological, infrastructural and institutional contexts on consumer behaviour (Liu et al., 2016). From this perspective, environmental change and increases in sustainability result from technological improvements in large institutions such as businesses and governments (Spaargaren, 2011). However, it is also these sociotechnical systems that have led to unsustainable actions and have created path dependency for consumers to act unsustainably (Shove, 2003a). The changes in technology are imposed upon consumers, changing the point of intervention from the individual to macro-social structures (Spaargaren, 2011). M. Keller et al. (2016) argue that these technological changes then linearly drive changes in consumer behaviour. However, these theories are problematic because they overlook individual agency, as before accepting a change in technology, individuals reflect on the changes it proposes, and thus, the introduction of a new technology does not automatically result in acceptance by the individual (Spaargaren, 2011, 2013). For example, Evans et al. (2020) details how a misunderstanding of the social dynamics around plastics led to the refusal of a simple, more environmentally friendly, material substitution. Though, again classified slightly differently, this approach lines up with Geels et al. (2015)’s revolutionary position. Geels and colleagues, however, add in the clause that proponents of this perspective call for the overhaul of large macro-structures, such as capitalism and the market economy, because they induce over-consumption. Yet, this has also not resulted in lasting policy change.

The pitfalls of these two classifications call for a change in perspective towards social practice theory, or as Geels et al. (2015) argues, the reconfiguration position. The shift in sustainable

consumption research from individualist and structuralist approaches to social practice theories, and the aspects of these theories that are of value to this research, are explained in section 2.3 below.

2.3. Social Practice Theory

This section focuses on social practice theory. As an opening note, social practice theory is defined as a group of theories rather than one centralized theory (Nicolini, 2012). In this section I first provide a short introduction to this group of theories, then I move to the characteristics of the theories that are relevant to this thesis. As such, social practice theory moves attention away from individualistic and structuralist theories to overcome the agency-structure dualism (Nicolini, 2012). It argues that, rather than externalizing habits and routines in behaviour change, they should be a central and endogenous aspect of understanding behaviour (Shove, 2010). Excluding these ignores central influences on choice and behaviour such as lifestyles (Spaargaren, 2003) and therefore pro-environmental changes are hindered and do not reach their full potential (Shove, 2010).

By putting analytical focus on the practice rather than the individual, social practice theory overcomes the issues of this dualism, because it incorporates “the routine nature of everyday activities, and the relationship of daily actions to broader social contexts (Shove, 2003[a]; Warde, 2005)” (Kennedy et al., 2015, p. 5). In practice theory, change “is more about shifting a practice, by gaining new knowledge, reworking habits and routines, social norms and power relations, rather than intention being the only thing to pursue change” (Kennedy 2015, p.5).

The next logical step then is to define a practice. While there are many ways a ‘practice’ is defined, each with its own merit, a commonly used definition and the one that is used for this research comes from Reckwitz (2002). He states,

A ‘practice’... is a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. (p. 249)

He continues to explain that a practice, “forms ... a ‘block’ whose existence necessarily depends on the existence and specific inter-connectedness of these elements, and which cannot be reduced to any one of these single elements” (p. 250). It is theorized that practices make up social life, and that by placing analytical focus on a practice, it is possible to both understand the possibilities of individual agency and how this agency interacts with routine, habits, systems of provision, and other societal structures (Nicolini, 2012).

Practices can simultaneously be performances and entities. The *doing* of a practice, such as shopping or preparing food, constitutes a practice as a performance, while the repeated doing of a practice can shift it into an entity that is reproduceable through space and time and that is able to be discussed (Shove et al., 2012). I argue that these discussions can then provide an opportunity to explore the different settings in which practices occur and what these settings can tell us about change and versatility in a practice as an entity.

Practices are interlinked with each other (Hui et al., 2017), and at the same time, are embedded in larger social structures. As such, these authors explain that many practices overlap and connect to each other, forming a mixed nexus of activities and routines. Hui et al. (2017) also argue that this nexus is “the locus of change” (p.6), and therefore, understanding practices, and their embeddedness as part of a larger nexus, is a promising avenue to improving the sustainability, in this case, of SUP consumption.

Within social practices literature it is evident that there are two ‘waves’ of social practice theories. The early work of Pierre Bourdieu and Anthony Giddens focused on the structure-agency dualism and understanding human agency (Kennedy et al., 2015; Spaargaren, 2011; Spaargaren et al., 2016). Moreover, Røpke (2009) argues that authors such as Reckwitz and Schatzki brought in a focus on materiality and other aspects in the later social practice literature. In addition to Reckwitz and Schatzki, I argue that the work of Shove and Spaargaren has also added new elements to the discipline in the second wave. Though the work of Bourdieu has been instrumental in recent work on consumption, Giddens’ work has been incorporated more into sustainable consumption theories (Kennedy et al., 2015), and relatedly, it forms part of the theoretical underpinning of this thesis. In the next section I will discuss the early work of Giddens and then I will move onto more recent versions of the theory in the subsequent sections.

2.3.1. Early Social Practice Theories

A key facet of early social practice theory, and one that is still prevalent in more recent work, is that individuals go through their day without paying attention to many aspects of their daily life. Offering a new path for environmental change, social practice theory moves towards the idea that, “our actions reflect an ongoing dialogue between agents and structures and a historically situated relationship of people to place” (Kennedy et al., 2015, p. 6). As such, Giddens’ theory of structuration focuses on this dialogue.

The theory of structuration is based on a key assumption – “the duality of structure” (Giddens, 1984, p. 5). The duality of structure “denotes the idea that social systems, social rules, and economic and political resources both constrain and support everyday practices” (Kennedy et al., 2015, p. 8). Specifically, this can enable an individual to complete their daily activities, however, the individual does not have enough power over these social situations to change its foundational structure by themselves (Kennedy et al., 2015). Moreover, Shove et al. (2012) argue that these structures are continuously being acted out and reproduced by actors, indicating that the actors have a level of agency over structures. That is, human actors and practices are impacted and shaped by structures, but they also have the ability to shape these structures with the enactment of the very actions that draw upon them, making them recursively related.

The duality of structure forms the base for Giddens’ further arguments on consciousness. As according to Kennedy et al. (2015), he argues that practices are a result of an individual’s knowledge. Giddens theorizes that individuals possess both practical and discursive consciousness. Practical consciousness is described as the ability to partake in everyday action as a result of internalised social knowledge (Kennedy et al., 2015). The outcome of this is that many daily actions are often performed without much reflection (Giddens, 1984). Relatedly, Kennedy et al. (2015) describe Giddens’ discursive consciousness as the ability to talk about social structures,

organisation, and rules. While much of our daily activity is rooted in practical consciousness, and thus outside of conscious awareness, it can be brought into discursive consciousness through deliberation, reflection, and interventions. Lastly, “in discursive consciousness lies the potential for change in practice, and therefore structure” (Kennedy et al., 2015, p. 9).

From this perspective, agency within practices shifts away from rational, psychological theories. Instead of understanding individuals as having (almost) full agency over their actions, Giddens suggests that individuals are restricted by certain structures, but still possess the ability to make decisions for themselves and change their routines and actions. It is this key factor that is important in understanding two larger theoretical consumption ‘camps’ within social practice theories: Shove’s elemental delineation of practices and Spaargaren’s model for studying practices (Welch & Warde, 2015). Both form the base of this project and will be discussed in later sections of this chapter.

2.3.2. Defining SUP Consumption

Adopting a social practice theory perspective holds several implications for understanding sustainable consumption. First, given the attention to the everyday nature of social action in practice theory, the areas of focus in consumption studies change. That is, rather than focusing on the acquisition of materials, social practice theories focus on more discreet forms of consumption that also have a large environmental impact (Shove, 2003b; Warde, 2005). These inconspicuous forms of consumption may go unnoticed by the consumer due to their habitual nature (Brand, 2010). Examples of these include showering, washing, and energy consumption (Shove, 2003b) and in the case of this thesis, single-use plastic consumption.

Second, with social practice theory, the concept of consumption turns from something that is done for the purpose of consuming, towards something that is done as a way to complete a task, activity, or practice (Warde, 2005). This is well summed up with Warde (2005)’s well-known quote, “consumption is not itself a practice, but rather a moment in almost every practice” (p. 137). Therefore, “[a]n individual’s pattern of consumption is the sum of the moments of consumption” (p. 144) and can be explained by studying the “volume of practices and commitment to practices” (p. 144).

This definition of consumption recognizes that consumers are restricted by several aspects. Warde (2005) argues that patterns of consumption are impacted by conventions of normality in the practice as well as the organization of the practice. As such, “it is the fact of engagement in the practice, rather than any personal decision about a course of conduct, that explains the nature and process of consumption.” (Warde, 2005, p. 138). By understanding that individuals are only at the intersection of practices, the focus shifts towards understanding the “tangled web of forces” (p. 142) at play in consumption practices rather than the intent of the individual. This perspective on consumption expands the range of consumption research, as with this project. Rather than focusing on SUPs that are explicitly used and consumed, it becomes possible to study the consumption of SUPs under the assumption that their consumption may not be deliberate and that they may be an important key in the completion of daily activities.

Turning back to Warde’s famous quote, SUP consumption in this thesis is defined as the utilization, including its acquisition, use and disposal, of SUPs in any practice. As such, when SUPs are used, acquired, and/or disposed of, they become the moment of consumption in various practices. These moments and the practices that have these moments form the base of this study. This exploratory study will work to uncover and better understand the moments of SUP consumption in the practices that arise. To study the impact of COVID-19, I will focus on any changes in the practices of SUP consumption, as well as the moments in practices at which SUPs are consumed. Next Shove and Spaargaren’s contributions to sustainable consumption in social practice theory are discussed.

2.3.3. Shove’s Understanding of Practices

Elizabeth Shove’s delineation of practices is a popular piece in the larger social practice theory literature that is often utilized in consumption research. Shove et al. (2012) use Gidden’s structuration theory to create the foundation for their elemental model. Using the example of skateboarding, the authors argue that a practice is composed of elements that occur together. These elements are understood and can be discussed by individuals, but they also draw upon various structures and systems for their performance. Therefore, practices are embedded in these structures.

Shove et al. (2012) refine Reckwitz (2002)’s elements of practices into materials, competencies and meanings. The authors define meanings as the “social and symbolic significance of participation [in a practice] at any one moment” (p. 23), competencies as the knowledge necessary to be able to partake in a practice, and materials as the objects related to the practice (Shove et al., 2007). When these elements are joined, they constitute a practice (Figure 2.1). For a practice to continue existing, it is necessary that these elements and linkages remain intact.

Here individuals are seen as carriers of practices, and the meanings, competences, and materials are seen as a part of the practice, rather than as personal characteristics of the individual (Shove et al., 2012). Individuals are practitioners who perform the practice, and as such, they draw on the structure of the practice while also reinforcing these structures and elements of the practice.

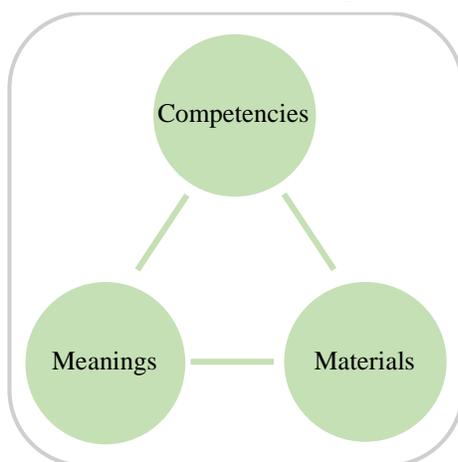


Figure 2.1 The elements of a practice. Adapted from Shove et al. (2012).

Through this model, Shove and her collaborators call for a detailed understanding of the complexities of practice in order to explore how practices can change to be more environmentally friendly. Through studying how practices emerge, transform, disappear, and become normal, modes of change come to light (Shove, 2010). Furthermore, with the elemental approach, Shove challenges the idea that change must occur through deliberate de- and re-routinization, rather that change can happen through “amplifying existing social orientations” (Welch & Warde, 2015, p. 8). For example, strengthening positive environmental action in practices.

Though there are many ways to classify the elements of a practice (Gram-Hanssen, 2011), Shove et al. (2012)'s classification will be used in this study due to the fact that it has proved to be highly operationalizable in sustainable consumption research as seen with the research of Hagberg (2016), Mylan (2015) and Sattlegger et al. (2020). Specifically, to understand SUP consumption in practices, this elemental model is useful because it provides a standardized way to view and breakdown practices, albeit it over simplifying relationships in some instances. This simplification is not overlooked in this research and will be further discussed in section 2.4. Through focusing on the elements and the relationships between the elements, it becomes possible to understand *how* SUPs are integrated into practices and how relationships that have less environmental impact can be formed.

Part of understanding consumption practices is understanding social norms within practices. Elizabeth Shove has long been discussing the implications of normative standards of conduct in consumption practices through her work on comfort, cleanliness, and convenience (Shove, 2003a, 2003b). In her popular work, she discusses how the practice of showering has changed over the years due to changing standards of cleanliness, convenience, and appearance, arguing that practices are, in part, embedded in and shaped by social norms of acceptable conduct (Shove, 2003b). Through a discussion on the increasing use of air conditioners, which has resulted in increasingly standardized indoor climates, Shove (2003b) explains that levels of comfortability have changed, and that this has led to changes in the composition of daily activities, building standards, and increases in energy consumption. For example, there is no need for a siesta when indoor temperatures are regulated.(Shove, 2003b)

Similarly, she discusses work on convenience in consumption practices. Warde et al. (1998) in Shove (2003b) consider differences between convenience, stating that modern convenience mechanisms shorten the amount of time necessary to complete tasks, while hyper-modernism convenience relates to reorganizing daily tasks so that individuals have more flexibility in their day. The result is that the hyper-modernism convenience results in a higher drive for convenience because it increasingly fragments time within an individual's schedule. As such, standards of what is normal changes, sometimes pulling in more convenience mechanisms.

The conventions of comfort, cleanliness and convenience do not always lead to an increase in consumption, and thus it is an interesting topic of study for this research on SUP consumption because it could lead to insights on how the consumption of SUPs are shaped within practices. Additionally, ignoring the normative standards of SUP use within practices, ignores larger social processes that are at work. That is, to understand how practices are embedded in, and how they reproduce social structures, it is important to understand those structures and how they are at play within practices of SUP consumption.

2.3.4. Spaargaren's Model for Studying Practices

The second major theoretical base this project draws from is Spaargaren and van Vliet (2000)'s conceptual model for studying practices (Figure 2.2). This model is comprised of three central concepts: the practices in the centre, lifestyles on the left, and systems of provision on the right. Practices are the central point of focus in this model and this model makes evident that practices



Figure 2.2 A Social Practices model for studying consumption. Adapted from Spaargaren & van Vliet (2000).

cannot be studied in a vacuum and, rather, they are products of, and impacted by, both lifestyles and systems of provision (Spaargaren, 2000). As such, studying the two sides of the model provides a holistic and fulfilling account of the impacts on practices and avoids a relapse into the micro and macro, or structure and actor, dualisms created by other sociological frameworks.

Spaargaren and van Vliet (2000), like Shove, base their work on Giddens’s structuration theory, as the diagram focuses on the relationship between practices, agents, and the structure of institutions. Again, using the duality of structure, they argue that social structures, being sets of practices, are impacted by the rules and resources on which they draw (the systems of provision), and are reinforced by the behaviour of the agents performing the practices (lifestyles). This makes these structures “both media and outcomes of human action” (p. 54).

Now turning to the model itself, on the left-hand side are the actors and lifestyles. When focusing on the left side, the individual’s (agent’s) “use of [social] structures, the knowledge they use to monitor their actions and to the resources they can mobilise to do so” is studied (Spaargaren & van Vliet, 2000, p. 54). Here, the lifestyles of individuals become the focal point of attention. A lifestyle is defined as, “[a] more or less integrated set of practices which an individual embraces, not only because such practices fulfill utilitarian needs, but because they give material form to a particular narrative of self-identity” (Giddens, 1991, p. 81). In this sense, the practices of an individual tell a story about how they would like the world to see them. A lifestyle in one part of an individual’s life can have a strong ‘green’ element, but this does not mean other lifestyles do (Spaargaren & van Vliet, 2000). As such, if an individual would like to have a certain level of credibility, there should be a certain level of coherence in their actions. The result is the impact of lifestyles on practices which the individual partakes in. Studying the lifestyles of actors in this study is important because it shows the meanings that underlie an agent’s participation in practices of SUP consumption as well as SUP consumption itself. Studying the relationship between lifestyles and practices of SUP consumption can show the opportunity to incorporate ‘green’ elements, or not, into practices of SUP consumption.

On the right-hand side of the diagram are the systems of provision. The inclusion of systems of provision details “the importance of the interconnectedness of provision and consumption” (Spaargaren & van Vliet, 2000, p. 58). Specifically, on the right side of the diagram “the focus is on the ways in which social practices are embedded in broader socio-technical environments” (Spaargaren & van Vliet, 2000, p. 55) and how the underlying rules and resources of practices structure systems of provision. The authors turn to the work of Fine and Leopold (1993) to exemplify their discussion on systems of provision. Recently however, de Feijter et al. (2019) used Fine and Leopold (1993)’s work and more recent work by Fine et al. (2018) to describe the systems of provision perspective. De Feijter’s work is used here to outline the systems of provision framework used in this research.

As according to de Feijter et al. (2019), in order to have a good understanding of systems of provision, in this case specifically related to SUPs, “the specificities of historical, economic, socio-cultural, geographical and material dimensions need to be followed across structures, processes, agents/agencies and relations” (p. 11). Accordingly, de Feijter et al. (2019) explain that structures “[create the] program standards, resources and regulatory frameworks” (p.11) that impact production and consumption, processes relate to how decision-making is organised, and various agents/agencies (grouped into citizens, private, and public agencies) have differentiated responsibilities in relation to consumption, end-of-life mechanisms, and production of materials. The relationships between these three elements of systems of provision shape and are shaped by practices. These elements together make up the study of systems of provision, and ways they may constrain or enable practices. Applying this to the study of SUP consumption, systems of provision are fundamental in providing SUPs. Having a deeper understanding of the processes at play in systems of SUP provision is key to understanding its relationship with practices that consume SUPs.

2.3.5. Investigating Shifts in Practices

Studying how shifts occur in practices is fundamental to this research in two ways. First, understanding how to shift practices of SUP consumption in a way that reduces their environmental impact is the underpinning goal of this research. Second, understanding the impact of the COVID-19 pandemic on practices of SUP consumption implies studying how practices have changed, and continue to change, as a result of the pandemic. This provides the opportunity to study real life examples of how these practices have shifted, with the possibility of providing insights on how to change practices of SUP consumption to be more sustainable. As such, this subsection outlines how change in practices occurs within social practice theory.

The disruption caused by the COVID-19 pandemic provides an opportunity to explore how practices are integrated into daily life because “disruptions give us short, momentary glimpses of the fabric of ‘normality’ as it is fraying and reveal the patterns in which practices and infrastructures are woven together.” (Chappells & Trentmann, 2019, p. 198). Specifically, this “fraying” provides us with a chance to study how practices are embedded into larger social infrastructures of provision and lifestyle, and potentially how change can occur within practices (Cass et al., 2015; Greene, Hansen, et al., in press). (Greene, Volden, et al., in press) argue that the way that (mobility) practices respond to the impacts of the pandemic is important to understanding “how practice histories, and place-specific practice bundles, shape how daily mobilities respond

in the present, as well as how this may influence future practice trajectories”(p. 6). While these authors focus on mobility practices, I argue the same can be said for practices of SUP consumption, or more broadly, general practices that do not relate specifically to mobility.

Social practice theory is fundamentally different from psychological and structural theories in how social change occurs and, relatedly, how environment-friendly change occurs to increase the sustainability of consumption. This is because change comes through changes in the practice (Warde, 2005). The COVID-19 pandemic can be a catalyst and provides a context for change to occur in practices (Greene, Volden, et al., in press). Similarly, “disruption can be framed as a speeding up of change in trajectories of practice evolution, that transpire as elements of a practice, or connections between practices which had previously been established, become unsettled” (Greene, Hansen, et al., in press, p. 3).

Outside of the specific context of disruptive events, Geels et al (2015) explain there are various ways in which practices shift over time and give a short overview of these changes (summarized in Table 2.1). First, Warde (2005) argues that the premise of behaviour change lies in the evolution of the practice itself. He explains that practices can change in four related ways. Practices have a history, and each has their own trajectory, and therefore the configuration of a practice in any moment of time is based on the embodied institutions of that practice. Moreover, referring to Giddens, the same practice may be performed differently in different situations because the actor can “experiment” with the practice (p. 141). These people push the limits of the practice in some cases changing it. Additionally, if the performances of practices are different between groups of people, this may also result in a new practice. As according to Warde (2005), practices can also

Table 2.1. A summary of how change in practices occurs. Adapted from Geels et al. (2015). Text in italicized font shows my addition.

Author(s)	Method of Change
Warde (2005)	Warde introduces 4 methods of change: <ol style="list-style-type: none"> 1. The performances of social practices vary with different social groups, and if these differences are large enough then a new practice emerges. 2. It is possible that objects move between practices, and ‘jump’ into another practice, changing that practice. 3. Practices can diversify into new spheres of practices. 4. There are people who may push the boundaries of a practice which can change it into something new.
Gram-Hanssen (2008)	Changes in technologies impact and may change a practice.
Mylan (2015)	There are connections between practices, and when one practice changes, another connected to it may as well.
Shove et al. (2012)	Each element of a practice has its own trajectory, suggesting that as these elements change, the practice changes. <i>When links between elements of a practice shift or are broken, the practice changes or ceases to exist.</i>
Southerton et al. (2004)	Changes in modes of provision may change a practice.

change when elements of a practice move to a different practice. That is, accomplishments, materials competencies, and procedures can be transferred between practices, thus changing the practice. One last related change in practice is the diversification of practices into a different set of practices.

Shove et al. (2012) extensively detail how change in practices occur, focusing heavily on how elements may shift, change, or stay the same. As according to these authors, elements have their own trajectory, each shifting over time, and as these elements shift the practices also shift. How these elements shift is important to understand, and I briefly expand on them as according to Shove et al. (2012). First, the shifting of material elements is often related to the physical relocation of materials, and how easily materials (literally) move impacts how easily they are shifted within the practice. This is related to the systems of provision of these specific materials, as each of these materials have their own history and trajectory. Second, the shifting of competencies refers to the changing know-how related to a practice. When moving between practices, these competencies are often altered slightly and adapted into different contexts. Third, meanings can merge, erode, and change quickly, or slowly. Shove et al. (2012) argue that meanings are, “unavoidably relative, situated, and emergent” (p. 53), making it important to also look at the related situated contexts as meanings can change with context. Moreover, the elements mutually shape each other, so a change in one element can change and impact another. Lastly, in addition to understanding how elements shift, Shove et al. (2012) also discuss that how links between the elements are made or broken also offers important insights into the stability and change of a practice.

In a similar vein, Shove et al. (2012) and Mylan (2015) both argue that a change in one practice may be connected to changes in other practices. Shove and her colleagues attribute this to the idea that similar elements can exist in different practices and when this link is broken in one practice, it can also impact a different practice. On the other hand, Mylan (2015) argues that the links between practices impact the stability of a practice and that the ‘tightness’ of these links impact how easily and successfully interventions are introduced into practices.

Gram-Hanssen (2008) and Southerton et al. (2004) discuss technologies and provisioning systems, respectively. Innovations in technology can change a practice and routines, while changing modes of provision of a practice can change the practice. Both these changes relate to Spaargaren’s work on his model and his argument of the ecological modernization of practices.

In the context of environment friendly change, Spaargaren and van Vliet (2000) argue for the ecological modernisation of practices as a way to lessen the environmental impact of consumption. Ecological modernisation has its roots in the emancipation of the ecological aspect away from cultural, economic, and social factors in decision making. They explain that the greening of lifestyles involves that ecological decision-making becomes increasingly equal alongside the other elements. When these factors are equal, the rationally deciding individual will weigh the impacts and importance of each of these factors and will make decisions based on their personal level of importance. Relatedly, the greening of consumption is also reliant on the innovations provided by systems of provision. That is, a reduction in the environmental impact of a lifestyle is only as successful as what is made available through specific systems of production. Conversely, the acceptance of environment friendly innovations in systems of provision rely on how well they fit into the lifestyles of individuals.

2.4. Tying it all Together into a Conceptual Framework

Both Shove and Spaargaren's work has advanced the topic of sustainable consumption in social practice theory immensely. However, both have their draw backs. To overcome this, I introduce a conceptual model that combines the elements of both models, SUP consumption, and features of change in consumption practices. First the draw backs of these two models are discussed, then the conceptual model is introduced and explained in terms of how the model is used and how it incorporates the operationalized concepts of this research.

Shove's elements offer a great way to dive deep into the specifics of practices in a simple yet informative way, and given my preceding discussion on changes in practice, also offers a great way to study change in practice. However, a major criticism of this model, one that the authors state themselves, is that it is reductive and simplistic (Shove et al., 2012). Specifically, it can oversimplify a dynamic process due its focus on the elements and the connections of the elements, rather than the network of practices in which they are embedded, such as systems of provision. Spaargaren (2013) argues that these elements often miss cultural importance. Where Shove's elements lack, Spaargaren's model succeeds, as his model more explicitly includes the embeddedness of practices and the impact of individual intention and lifestyle. Though Shove does discuss the embeddedness of practices, Spaargaren's model includes and explains the need to study both sides of his model because they both impact practices (Spaargaren & van Vliet, 2000). Given this, the model has been critiqued to not be dynamic in its own right (Shove, 2010), and I argue that, while the focus on understanding the embeddedness of practices is beneficial, it comes at the expense of deeply understanding the complexities of the practices themselves and their dynamics.

Both models approach environment-friendly change and agency from different perspectives. With Shove's elements, focus lies in understanding the practices (how they emerge and how things become normal) and what will lead to more of less consumption of resources, while Spaargaren focuses on 'purposive projects explicitly fueled by sustainable consumption' (Welch & Warde, 2015, p. 5). Along similar lines, Spaargaren sees the practitioner's agency as an intentional effort to reduce environmental impacts of consumption (Welch & Warde, 2015), while Shove tries to distance herself from the assumption that environmental intentions is a prerequisite for changes in consumption, rather focusing on processes of path dependency (Shove, 2003a). This thesis is fueled by the aim of changing SUP consumption practices to be more sustainable, but it also wishes to understand the complexities of practice and to understand what leads to 'better' or 'worse' behaviour. Therefore, I wish to combine the best elements of both Spaargaren and Shove's theoretical camps. Figure 2.3 depicts this combination, and I will explain it in the following text.

The exploratory nature of this research leads me to keep an open mind on which practices involve SUP consumption and how they might be impacted by COVID-19. As such, Shove's elements are instrumental in understanding the dynamics of whichever practices may come to light. Moreover, Spaargaren's explicit discussion on agency and intent is also beneficial when discussing SUP consumption, hence the lifestyles and systems of provision aspects are also included in the framework. What this combination allows for is a fruitful discussion of context, agency, and specifics of practices. This combination also allows for Warde (2005)'s explanation of SUP consumption to be included in this framework in a meaningful way, as Spaargaren stays away from defining consumption.

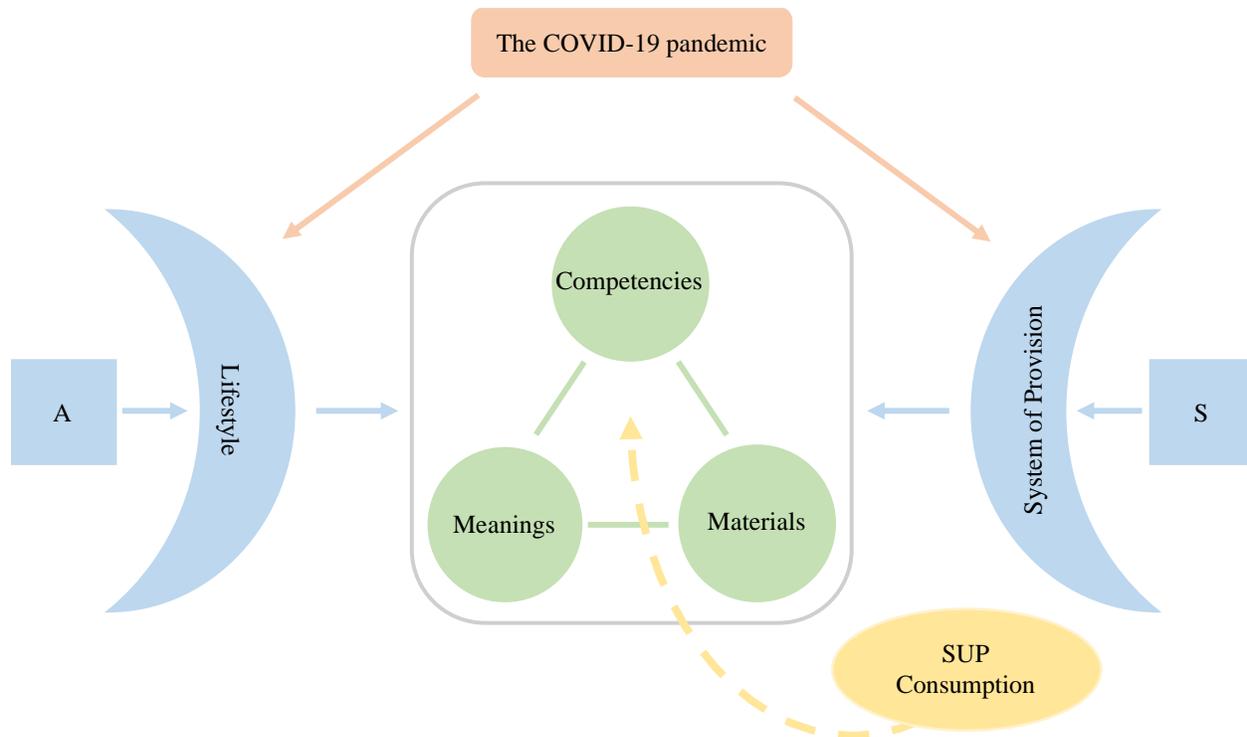


Figure 2.3 Conceptual framework. This conceptual framework is a combination of Shove, Spaargaren, and Warde's theoretical contributions to sustainable consumption within the social practice theory discipline. The central box (outlined in grey) represents the practice of focus and its elements (from Shove et al. 2012). In yellow, SUP consumption is incorporated into this practice as a moment in the practice, as according to Warde (2005). Spaargaren's contribution is coloured blue to show the relationship between lifestyles and systems of provisions and practices. Lastly, the impact of the COVID-19 pandemic is represented by orange arrows. The COVID-19 pandemic has the potential to have a direct impact on lifestyles and systems of provision. These in turn have an impact on practices of SUP consumption.

Having introduced, defined, situated, and critiqued the important concepts of the research questions, I can now continue to operationalize them by explaining how they relate to each other in the conceptual framework. Beginning at the centre of the diagram, outlined in grey, is the performance of a practice (though several are studied throughout this research), and this practice is broken into its elements. This makes it possible to study the elements, the relationships between the elements of the practices, and how SUPs are integrated into these practices. Additionally, providing a central focus on practices allows for an in-depth study of its situational performances and how these change between the different practitioners partaking in this study. It shows agency within practices by focusing on the enabling and constraining factors of SUPs and how this impacts consumption.

The idea that SUP consumption is a moment in every practice is demonstrated in figure 2.3 by its central inclusion into the practice. More specifically, the consumption of SUPs is always related to the material elements of the practice, as single-use plastics are a physical material. However, the consumption of SUPs within various practices are impacted by dynamics, that is, the meanings of the practice, competencies, other material elements, the systems of provision which provide or restrict plastic, and the lifestyles of individuals.

Understanding situational performances of practices of SUP consumption is greatly impacted by the systems of provisions and lifestyles of individuals and therefore they are incorporated into the conceptual diagram on the left and right sides, as in Spaargaren's model. The relationships between lifestyles and practices, and systems of provision and practices, are studied in this research because systems of provision vary between situational contexts, impacting SUP consumption, and because how individuals express themselves impacts their choice to consume SUPs and their participation in practices of SUP consumption.

What the reader might have already noticed is that some characteristics of each theoretical 'camp' fit better together than others. For example, though systems of provision are much more than just material providers (they are also policy frameworks, waste management and financing) they are the main process of material provision to consumers and therefore have a heavy material 'weight', lining up easily with Shove's material elements. Additionally, lifestyle impacts which practices individuals choose to partake in and how they express themselves. But, "by participating in some practices but not others, individuals locate themselves within society and in so doing simultaneously reproduce specific schemes and structures of meaning and order" (Shove et al., 2012, p. 54). Therefore, participation in a practice is also impacted by the meanings associated with a specific practice. For example, grocery shopping likely has the same base meaning of sustenance gathering for everybody who partakes in the practice, however, it may also have meanings of a chance to be 'green' or of convenience. One individual may be more inclined to skip using a produce bag, or bring their own grocery bags, if their ecological intentions align with their other values. As such, here grocery shopping is an opportunity for this individual to show their intentions because of the (potential) 'green' meaning of the practice. Conversely, an individual who does not put as much value on environment friendly options, and who cares more about convenience, will likely not want the burden of remembering their bags every time they go to the store, and rather take the options that are available to them. For this individual, the environmental meanings of grocery shopping are weaker.

While these similarities are beneficial for coupling these two camps together, it is also important to ensure that the focus will not only be on these two relations. Systems of provision also impact meanings and competencies, and lifestyles also effect competencies and materials. Keeping this in mind throughout this research will help overcome the reductionist elements of both theories as it facilitates a dynamic understanding of practices.

A major part of this thesis is studying the impacts of the COVID-19 pandemic on SUP consumption and practices of SUP consumption. Turning then to the upper most, and orange, part of figure 2.3 is the impact of the COVID-19 pandemic. The COVID-19 pandemic is theorized to have a relationship with practices of SUP consumption by impacting lifestyles and systems of provision. The mechanisms of change discussed in section 2.3.5 are relevant here, as well as for understanding the dynamics of consumption practices more generally.

How the COVID-19 pandemic impacts a lifestyle is not only about the direct impact that it has on daily routines (i.e., the arrow pointing from COVID-19 to lifestyles) but also about how lifestyles, which have been impacted by the pandemic, relate to practices of SUP consumption. The latter of these relationships will be studied in this research because the impact of the COVID-19 pandemic on SUP consumption is different per actor given lifestyle. For example, some individuals may be

more risk averse than others. This may impact their daily activities so that they are less willing to go to social gatherings. Therefore, it is possible that how well the impacts of the virus are 'accepted' and acted upon is subject to the lifestyles of the actors partaking in the practice.

As structures, processes, and agents make up systems of provision, it becomes relevant to study the impacts of COVID-19 and how this has impacted practices of SUP consumption. For this research, the direct relation between the impacts of the COVID-19 pandemic and systems of SUP provision will not be largely studied (i.e., the arrow pointing from COVID-19 to systems of provision), but rather taken as a starting point for further analysis. Instead, a larger focus will be on the impact that the changes in provisional systems (that occurred as a result of the pandemic) have on practices of SUP consumption.

2.5. Conclusion

A conceptual diagram like the one in figure 2.3 creates many areas to focus on. While I believe this framework offers a map for exploring practices in an in-depth way, it also asks a lot from researchers. The resources of this research, unfortunately, do not allow for this diagram to be explored in every possible corner. However, it does allow for each of the relationships mentioned above to be studied and it provides a great organizational foundation for the findings of this research. As such, the first sub-research question will be answered by focusing on the centre of the diagram (grey and yellow sections). The second, by studying the relationships between COVID-19, lifestyles, and systems of provision (orange coloured section). Lastly, the third sub-research question will be answered by looking at the blue elements of the diagram: the lifestyles and systems of provision. Moreover, the latter three of the four findings chapters are organized as according to the three central sections of the diagram, Shove's practices, lifestyles, and systems of provision, respectively.

This chapter travelled through a discussion of the sociology of consumption, the pitfalls that led to social practice theories, the relevant aspects of practice theory for this thesis, and a conceptual model for this project. My next chapter will continue with the operationalization of the key concepts I have introduced in this chapter through a methodological discussion and by introducing the temporal scheme of the data collection phase of this research.

3. Methodology

3.1. Introduction

This chapter is dedicated to discussing the methodology of this thesis. It also acts as a continuation of the operationalization of the key concepts and constructs discussed in the previous chapter. To do so, I first provide the reader with the epistemology and methodology underpinning this study in section 3.2. Then I move on to the methods. In section 3.3 I detail how the research instruments of desk research, interviews and diary entries are suitable in studies that apply social practice theory, explain the ethical considerations in relation to these instruments, and detail my decision process for choosing the baseline SUPs for this research. After this, the process for data analysis is shortly discussed in section 3.4.

3.2. Epistemological and Methodological Underpinnings

In this section I discuss the epistemology and methodology that structures the methods and research instruments of this research project. When we return our attention to the research questions of this project, which focus primarily on investigating complex practices of SUP consumption, it becomes evident that the interpretivist epistemology is suitable for this research. This is because in interpretivism, “the goal is to understand the complexity of the human experience. The researcher is a student of social life and the researcher is a social member, hence complete objectivity is impossible” (Loseke, 2013, p. 22).

There are similarities between the perspective of interpretivists and social practice theorists that ascribe to Giddens’s theory of structuration. The interpretivist perspective outlines that humans share and assign meaning to the environment and social settings in order to make sense of the world around them (Blaikie, 2004). Additionally, humans test and modify these meanings as they face new experiences (Schwandt, 2007). This indicates that individuals are impacted by the environment around them, and when adding Giddens’s duality of structure, it becomes evident that the two follow a similar frame of thinking.

This research forms an exploratory study for two reasons. First, a goal of this study is to better understand the practices which consume SUPs and the impact of social dynamics and COVID-19 on these practices. This can be done well through a deep exploration of the topic. Second, as outlined in the previous two chapters, SUP consumption has not been largely studied through the social practice theory lens. Interpretivism lends strength to this exploratory ‘categorization’ because exploratory studies aim to create a detailed understanding of a phenomena (Stebbins, 2001), and thus, understanding how this study’s participants comprehend the world around them, as well as the meanings of SUP practices, is vital.

Halkier & Jensen (2011) argue that social practice theory follows a social constructivist perspective. Constructivism, like interpretivism, questions objectivity and impartiality in science (Maréchal, 2010). Specifically, social constructivism assumes that, “Meanings are developed in coordination with others rather than separately within each individual or in the world of things, making social interaction the loom upon which the social fabric is woven.” (Leeds-Hurwitz, 2009,

p. 892). As such, Halkier & Jensen (2011) argue that a social constructivist approach lends particular focus on the production of social dynamics and the variation in such dynamics. This aligns well with the focus of this study. With this perspective come two analytical affordances: to better understand how consumption practices are part of a web of social interactions, rather than only a result of individual choice, and that they are dynamic practices constantly undergoing changes (Halkier & Jensen, 2011). These two affordances are reflected in the selection and creation of the research instruments.

3.3. Methods

Keeping the epistemological and methodological underpinnings in mind, this section outlines the rationale behind choosing and constructing the research instruments of this study. To gain an in-depth understanding of SUP consumption practices, the social dynamics, and the impact of COVID-19, this research was split into two main research streams:

1. *A contextual research stream.* The desk research stream consisted of gathering background information on SUPs, disposal, and COVID-19 policies in Calgary and Alberta. This stream made up a small portion of the overall research conducted.
2. *A daily practice stream.* This stream makes up the majority of the primary data collected in this research, focusing on the lived practices of participants in this project.

In total, 24 interviews (including pilot interviews and one contextual interview) were conducted. More specifically, 11 individuals participated in the daily practices stream, each completing an interview, followed by seven days of diary entries, and then a second interview. In keeping with the COVID-19 restrictions of the time, all interviews, except for with one participant, were conducted online through Microsoft Teams and diary entries were completed and sent electronically. The respective interview guides and diary templates can be found in Appendix 1. I will briefly describe the desk research portion, and then will dedicate the rest of the chapter to the much larger primary data gathering stream.

3.3.1. Contextual Desk Research

To gain an in-depth understanding of the local context of consumption practices, it is important to understand the social processes at play in each location. This includes factors affecting the systems of provision, COVID-19 policy contexts, disposal of SUPs, and policies regarding SUP consumption in Calgary. The desk research process was an iterative process that occurred throughout the course of this research. As such, majority of this research was focused on providing information on the provisional systems in Calgary relating to the COVID-19 policies implemented throughout the pandemic, the SUP policy landscape in Calgary and Canada, and the disposal infrastructures in Calgary.

Methods involved content analysis of government websites, reports, news articles, and an interview with a City of Calgary employee on the topic of Calgary's Single-use Item Strategy. This interview occurred in the beginning of January and lasted approximately 1 hour. The findings for this research stream can be found in the Local Context chapter (Chapter 4).

3.3.2. Daily Practices Stream

By focusing on the daily practices which consume SUPs, this stream aimed to gain an in-depth understanding of these practices. This was done through conducting two interviews and seven days of diary entries with the participants in this study. Semi-structured interviews and diary entries make up the bulk of the primary data collected for this research. This sub-section discusses the rationale for the use of these research instruments, and details the temporal approach of this research, and the characteristics of the final sample.

3.3.2.1. *Rationale for Research Instruments*

Discussing daily practices through interviews provides the opportunity to understand the social dynamics of SUP consumption. As such, the goal of interviewing participants was to provide insight into the utilization of plastics and the experiences and lived routines of participants. This was done with the intent to bring into focus the materials, meanings, competencies, and the impact of lifestyles and systems of provision on practices of SUP consumption.

There is discussion within social practice theory literature regarding the adequacy of interviews as a research method to study practices (Halkier & Jensen, 2011; Hitchings, 2012). Some researchers argue that discursive methods do not adequately provide opportunity to study the habitual aspects of practices (Hitchings, 2012), and researchers of this stance often explain that observational methods are necessary to access these more subtle elements of practices. However, Hitchings (2012) refutes this and, instead, argues that interviews can be a useful tool in studying consumption practices. This is because individuals have agency in their daily life and because individuals can talk about their practices.

Using Giddens' concepts of discursive and practical consciousness, Hitchings (2012) argues that interviewing can bring elements of practice that were previously habitual into discursive consciousness, providing the possibility for the interviewee to reflect and comment on their practices. Hitchings also hinges his argument on the agency of individuals, explaining that people continue to actively think, even after being recruited to a practice. Furthermore, Halkier & Jensen (2011) argue that, under the blanket of social constructivism, interviewing provides an opportunity to create knowledge, and that the data of interviews and diary entries are products of the participant's actions and relationships with others. These authors also argue that observational methods are riddled with interpretative difficulties, just as the interview data is, meaning one is not inherently better than another. Taking these arguments, I aimed to build interview guides that provided adequate opportunity for individuals to reflect and talk about their practices, in order to overcome these issues associated with interviewing.

As this project was performed during the COVID-19 pandemic, in-person observation was largely impossible. Hence, the diary entries also offered a creative form of observation 'from a distance', as to get an account of daily SUP consumption. Much SUP consumption may go unnoticed (Evans et al., 2020), thus diary entries were chosen as a method because they can provide an opportunity to reflect on personal SUP consumption. Moreover, this reflection also acted as an opportunity to help participants to talk, perhaps more comfortably, about their consumption in their following interview. With a combination of structured and open questions, the diary entries provided a

standardized way to breakdown practices since, as Meth (2003) argues, they are a helpful tool because they can provide deep insight and detailed daily accounts of events. This can help avoid issues with recounting memories.

3.3.2.2. A Serial Approach

Hitchings (2012) explains that a serial approach to interviewing can be beneficial when studying practices as it can provide an opportunity for individuals to reflect on the habitual nature of their practices as well as to build rapport with the interviewees. Additionally, Bartlett & Milligan (2015) argue that a combination of interviewing and diary entries are a creative combination that can be used to dive further into what is discussed in the diary entries. As such, a combination of interviews and diary entries was instilled, and this research had a specific temporal order. Specifically, it consisted of a first set of interviews, followed by a week of daily diary entries and then a second interview (figure 3.1). The temporal scheme of this research and the topics of discussion for each phase of data collection are discussed in this subsection.

The first interview served as a way to introduce the participants to the project, to build rapport with them as suggested by Arsel (2017), and learn the basics of the participant’s practices of SUP consumption. Topics of this interview were related to their daily practices, SUP consumption, and the various ways in which they have been impacted by the COVID-19 pandemic. To introduce the topic of SUP consumption, I showed participants a collage of SUPs and asked them to reflect on which SUPs they consumed and when. Moreover, the impact of COVID-19 was discussed in relation to a COVID-19 policy graph. This graph served as an opportunity for participants to refresh their memory and reflect on their life during the first year of the pandemic. The collage and graph can be found in Appendix 2. Apart from the first pilot interview, the first set of interviews were conducted from January 17 – 27, 2021 and lasted between 1 hour and 20 minutes and 2 hours.

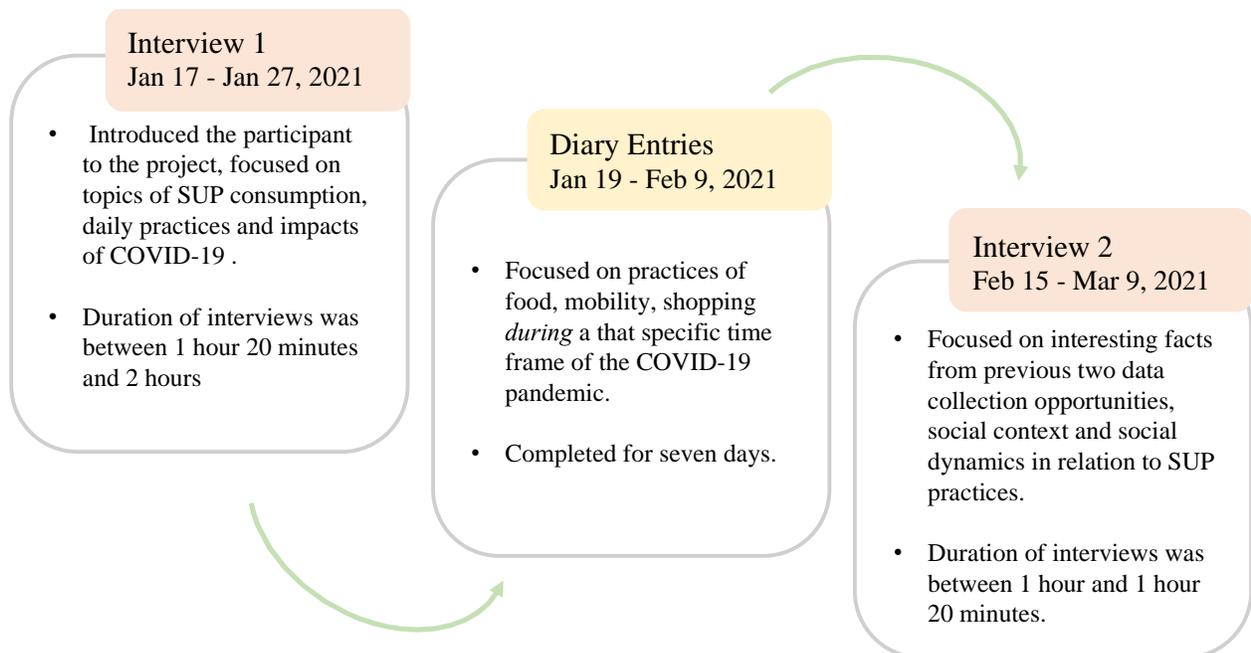


Figure 3.1 A temporal scheme of the data collection period. The green arrows represent preliminary data analysis between the three phases of data collection.

Next came the diary entries. These were designed to break down daily routines into spatial, temporal, material, and social aspects of practice, in a similar way to Greene (2017). The purpose of this was to create a standardized format of information regarding practices of SUP consumption, which could then form the base of the second interview. The topics of the diary entries aimed to focus on food, mobility and shopping practices while also providing space for open discussion on SUP consumption and how this changed from day to day. Inspiration for the format of these diary entries came from Greene (2017) as her diaries provided a clear and simple template for her participants to fill out, while providing rich detail on practices.

Starting the week after the first interview, the participants were asked to complete seven days of diary entries. The diary entries took approximately 15-30 minutes to complete each day, depending on how many activities the participant participated in that day. Apart from pilot participants, who completed the diaries in the earlier weeks of January, and the diary entries were completed between the dates of January 19 – February 9, 2021.

As a last form of participation and data collection, the second interview served as an opportunity to dive into interesting topics that arose from the first interview and diary entries, and to discuss topics that needed clarification. The focus of the second interview was primarily on social context and settings. As such, more situational topics were covered. These topics were: if and how SUPs are consumed differently and for different reasons, in different social contexts, the disposal of SUPs, and if and how change occurred in routines during the COVID-19 pandemic.

The second interview involved a considerably higher amount of preparation before each interview. Though a base interview guide was created, each interview was tailored to the topics that each participant discussed in the previous interview and diary entries. This second set of interviews was conducted between the dates of February 15 – March 9, 2021, and lasted approximately 1 hour to 1 hour and 20 minutes.

3.3.2.3. *Sampling*

Exploratory studies require flexibility in data collection (Stebbins, 2001). While remaining within the local context of Calgary, this research aimed to find a diverse sample of individuals. This is because the COVID-19 pandemic is known to have different impacts by, for example, lines of gender, age, income and household size (Life with Corona Network, 2020), and because SUP consumption practices may differ between individuals who complete different daily activities. Therefore, when finding participants, I followed four criteria as to find a variety of individuals to partake in this study. The rationale is explained for each below:

- *Gender*: Consumption and waste disposal are known to differ between gender (OECD, 2020). For example, some women are more sensitive to ecological, environmental, and health concerns and thus they are more likely to recycle, which I argue, can impact SUP practices. Moreover, the pandemic also has varying impacts on gender. For example, stress levels differed by gender (Life with Corona Network, 2020).
- *Age*: I argue that the daily lives of individuals at various life stages and ages can differ, and therefore, the SUP consumption of individuals may also differ. Additionally, the pandemic affects individuals differently based on age (Life with Corona Network, 2020).

- *Household Composition:* As according to OECD (2020), the responsibilities that individuals hold in a household may impact consumption. Therefore, I argue that it is also possible that the various roles in the household can also impact SUP consumption. Moreover, the Life with Corona Network (2020) argues that the tension levels that individuals feel in relation to COVID-19 differ between household size and the presence, or absence, of kids.
- *Occupation:* This study aimed to find a sample of individuals working a variety of occupations, instead of searching for individuals with a variety of incomes. Income, I argue, is less descriptive of an individual's consumption than occupation. This is because an individual's income does not speak to their partner's income, if they have one, and says even less about their lifestyle. Rather, occupation is more indicative of an individual's daily activities, and it is an easier avenue for discussion and building rapport. Since the daily activities can be different with each occupation, it is also possible that each individual was impacted by COVID-19 differently.

Sampling for this study followed purposive sampling, as to find a group of participants who satisfy the above pre-decided criteria. In reaching out to potential participants, I asked my family members to bring the project to the attention of their friends and colleagues, and each participant was provided an information sheet. This document held the relevant information to help with their decision to participate in the project and is included in Appendix 3. Upon choosing to participate, participants were able to contact me directly or to notify my family members.

The final sample consisted of 11 participants, 6 of whom were male and 5 were female. Age ranged from 25-65 years of age, each living with a variety of households. Some individuals lived by themselves, with one other partner, or with young or adult children. The participants in this study consisted of a variety of occupations. The final sample consisted of healthcare professionals, a labourer, a mechanic, a retiree, a part-time worker, and a student. Table 3.1 shows a final breakdown of the sample. I have chosen not to link each of the characteristics to the participant's pseudonym as to preserve the anonymity of the participants. In subsection 3.3.4 I further discuss the ethical considerations related to this project.

Table 3.1 Breakdown of participant characteristics. This table represents the characteristics of the participants in the final sample. The characteristics are not ordered per participant, rather alphabetically or smallest to largest, to preserve the anonymity of the participants. Values in brackets represent the number of participants with that specific trait.

Characteristic	Breakdown
Pseudonym	David, Debra, Dylan, James, Janice, Mandy, Nadia, Nate, Nina, Vince, and William
Gender	5 females; 6 males
Age	25; 26; 30; 33 (x2); 32; 42; 49; 53; 65 (x2)
Household Composition	only participant; participant and partner (x4); participant, spouse, and adult child(ren) (x2); participant, spouse, and teenager; participant, spouse, and young child (x2); participant and their parents.
Occupation	Automotive Technician; Clerical Worker, Peace Officer; Project Manager; Registered Nurse (x3); Retired; Labourer; stay-at-home mom and Gardener; student and Graphic Designer.

3.3.3. Piloting the Research Instruments

Before initiating each round of interviews and distributing the diary templates, the interview guides and diary template were piloted. Each guide was piloted twice, by two different participants. One participant was consistently the first pilot for each interview guide and diary template, while three different individuals acted as a second pilot after preliminary changes were made. Specifically, a different individual piloted each method (i.e., interview #1, diary guide, and interview #2). The data collected from each pilot is included in the final data set, except for one individual because they did not reside in Calgary and because their data was lost.

Apart from providing an opportunity to ensure all technical aspects of the project were working properly, each pilot also provided valuable information in improving each guide and template. The pilot of the first interview guide resulted in the most changes to the guide when compared to the other two templates. The result was that the revised interview guide put more emphasis on SUP consumption, dove more into specifics of SUP consumption practices, and provided more detail on the SUP collage. Additionally, the pilots of the first interview led to the significant realization that it is difficult to ask interviewees about the relationship between SUPs and the impact of the COVID-19 pandemic. This led to inserting a transition into the topic of COVID-19 through the use of the SUP collage, as to keep SUPs front of mind.

The diary entries and second interview guide did not require as much revision. The major discovery from the diary entry pilots was that they took longer than expected to complete, however, this did not lead to any large changes in format. The pilots for the second interview resulted in increased personal reflections on my part as a researcher. After these pilots, I planned to focus on being specific, to not add my own personal value to my questions, and to continue to focus primarily on social dynamics and settings during this interview.

3.3.4. Ethical Considerations

Upon choosing to participate, participants were asked to sign or verbally consent to the contents of the consent form which I created (the form can be found in Appendix 3). Additionally, I informed each of the participants that they were able to terminate their participation in the project at any time. The participants were assured confidentiality, and anonymity for their personal information, throughout the project and that their comments and quotes would not be traceable in the final product. As such, the names used in the following chapters, and on the documents created throughout the project, are pseudonyms to protect the participant's identity.

All participants consented to being audio recorded and were notified when two recordings were occurring so that they were aware of number of copies of their data. The data (audio recordings, transcripts, and diary entries) were stored on my personal computer as well as on my university OneDrive account, both are password protected. Finally, with the exception of one, participants were made aware that their recordings would be transcribed by an online transcription software. For this participant the data was transcribed by hand, as to not upload their information without their prior consent.

3.3.5. What Constitutes a SUP and Why?

There are *many* different kinds of SUPs. They come in an almost infinite number of shapes and sizes, making it difficult to create a comprehensive list of SUPs. Therefore, I used a list created by the Government of Canada as a benchmark for the SUPs studied in this research. The Canadian government is currently working to ban and reduce certain SUPs, and to determine which SUPs to reduce, a list was compiled based on research conducted on the environmental harm and value recovery rates of various plastics (Environment and Climate Change Canada, n.d.). Any SUPs that fell under the categories of high environmental harm or low value recovery were listed. This list is provided in Appendix 4.

Given this, many more materials than those listed in Appendix 4 could be categorized as single use when defining SUPs by the UN definition provided in Chapter 1. Examples of these plastics include shampoo bottles, makeup bottles and various forms of packaging. These plastics are not included on the list, highlighting the ambiguity of the UN definition and the subjectivity of the Canadian government's classification scheme. Nonetheless, this list still covers many SUPs and acts as a good starting point. Moreover, room was provided during the interviews and diary entries to discuss any SUPs that participants thought were missing.

The SUP list was translated into a collage, which was shown in the first interview. This collage is included in Appendix 2. It is important to note that some photos have more than one meaning as, for example, a black takeout container acts as a takeout container, but also a material comprised of black plastic. The meanings behind these photos were explained to most participants in the first round of interviews.

3.4. Data Analysis

Data analysis occurred throughout the data collection phase as well as after its completion. With the exception of one interview, all were transcribed with the artificial intelligence software "otter.ai". Transcription began immediately after each interview, and when finished, the transcript was reviewed for spelling and grammatical errors. This included in some cases, listening along to the audio recording when reading, or simply reading the transcript. This was to help myself become familiar with the data so that I was able to properly prepare for the second round of interviews. The data the participants provided was summarized into a personalized 'case file' which served as an overview for each participant and was useful when looking for preliminary themes and trends within the data.

After creating the case files, analysis and coding of the transcripts and diary entries followed a combination of inductive and thematic analysis. Inductive analysis uses a set of "sensitizing concepts" (Blumer, 1954, p. 7), in this case the theory related to practices and SUPs discussed in the previous chapter, to guide the researcher into finding themes and variations in the phenomenon that is being studied (Johnson, 2011). Johnson (2011) explains that inductive analysis is different from deductive analysis because it does not take predefined categories and apply it to the data, rather it allows for categories to form from the data, and it allows these categories to continue to shape and change as analysis proceeds. Moreover, thematic analysis focuses on uncovering themes

and interpreting these themes by looking for patterns and relationships between themes (Lapadat, 2010). I used these two concepts together when coding my data.

Coding was performed through the program MAXQDA. Each of the interview transcripts and diary entries were coded by labelling practices of SUP consumption, the changes seen due to the pandemic in these practices, elements of social contexts, and themes associated with SUP consumption. A final coding list can be found in Appendix 5. Moreover, analysis focused on the discovery of the elements of practices of SUP consumption, how these changed due to the COVID-19 pandemic, and the meanings attributed to the SUPs themselves. After coding, I further analyzed the coded practice categories to find patterns and differences within each practice. I broke down the three practices that were most popular into statements about the meanings, competencies, and materials. I did the same for the changes seen in these practices as a result of the pandemic. Specifically, I separated statements on 'COVID-19 practices' from statements on 'non-COVID-19 practices'. This is because, as a small aside, this research was conducted during the pandemic, and therefore the practices discussed in the results chapters (Chapters 5-7) also occurred during the pandemic. This could make it difficult to distinguish between 'pre' and 'post-'pandemic times (I say pre- and post- here to represent a time before the pandemic, even though we are currently still living in the pandemic). However, during the interviews I distinguished questions based on time, such as before or after the pandemic began, as well as during the pandemic. Therefore, it is possible to separate, 'pre-pandemic' practices from the changes seen during the pandemic. With that, when I discuss practices in the results chapters and when I do not directly refer to the changes that occurred during the COVID-19 pandemic, I wish the reader to keep in mind that these practices likely occurred prior to the pandemic and still occurred during the pandemic. As such, participants likely discussed their practices from before the pandemic, and the practices in which they did not see large change, simultaneously. Therefore, these practices must be understood as occurring during the pandemic, and that it is possible there may be small changes that occurred due to the pandemic. Coming back to the more general discussion on data analysis, after breaking the practices down into the elements for both sets of practices, I compared each with each other. This process led to uncovering the social dynamics that impact practices, and when writing up my findings, I applied Spaargaren & van Vliet (2000)'s model to the findings to incorporate all elements of the conceptual framework. These findings are discussed in Chapters 5-7; however, before discussing the findings, I detail the local context of Calgary in the next chapter.

4. Findings 1: The Local Context of Calgary

4.1. Introduction

This chapter aims to provide the reader with the necessary background information regarding the various provisional systems in Calgary. Specifically, the COVID-19 context and two systems of SUP provision (i.e., the SUP policy landscape and disposal infrastructures) are detailed. This chapter also acts as the first findings chapter of this thesis and discusses the results of the desk research conducted for this study. Additionally, as explained in the previous chapter, I conducted one ‘contextual’ interview on the topic of the Single-use Items Strategy in Calgary, and I incorporate this interview into this chapter. Accordingly, this chapter is intended to provide a snapshot to the reader about the local context in Calgary, rather than a detailed analysis of the systems of provision related to SUP consumption. The chapter is split into three sections. The first covering the COVID-19 pandemic in Calgary (section 4.2), the second discussing SUP consumption strategies and policies impacting the city (section 4.3), and the third providing information on local disposal options (section 4.4).

4.2. COVID-19 in Calgary, Alberta, and Canada

In Calgary, the administrative response to the COVID-19 pandemic materialized through a combination of policies, initiatives, and restrictions implemented by three different layers of government: the federal, provincial, and municipal governments. Due to the country’s structure as a federation, each province in Canada has their own government with constitutional powers and lawmaking abilities (Government of Canada, n.d.-b) (the northern territories of Canada have smaller populations, and therefore they do not have the same legislative status of a province, but their governments provide many similar functions (Government of Canada, n.d.-a)). In relation to the pandemic response, the federal government has control over, for example, national borders, trade, and commerce (Feder et al., 2020), while provincial governments, under the declaration of a provincial public health emergency, have considerable power on topics of recreation, entertainment, and group gatherings (Block et al., 2020). Additionally, municipalities have the power to implement by-laws, such as the requirement to wear face masks in indoor public places. Such a by-law came into effect in Calgary on August 1, 2020 (The City of Calgary, 2020), previous to that directed by the province, who implemented a mask mandate on December 8, 2020 (Government of Alberta, n.d.-e).

In comparison to the second wave of the pandemic, the province of Alberta had a small first wave (Government of Alberta, n.d.-a), as the daily infection rates were some of the highest per-capita rates in Canada at the time of the second wave (Woo et al., 2021). Of course, the policies and restrictions in place shifted with the number of cases seen during the pandemic. In keeping this discussion focused on the city of Calgary, I discuss here the policies that affected life in the city. Nonetheless, many of the policies that impact the city of Calgary have been implemented by the provincial government. While there have been many COVID-19 restrictions implemented, the ones that were introduced to the participants during their interviews are discussed here. In the interviews, I chose specifically to highlight the restrictions which I found directly impacted the activities that individuals partake in in their daily life. For reading ease, figure 4.1 depicts a single

timeline of these policies, while as mentioned in Chapter 3, Appendix 2 holds the visuals provided to the participants during their interviews. I briefly introduce the policies in the text below.

The first presumptive case of COVID-19 in Alberta was found on March 5, 2020, and approximately a week and a half later both the city of Calgary and the province of Alberta declared states of emergency (Herring, 2020). The restrictions during the first wave consisted of restrictions on gatherings and the closure of schools and businesses such as dine-in services at restaurants and close-contact services (Government of Alberta, n.d.-b). By May 3, 2020, the first wave was signalled to have passed (Herring, 2020), and the provincial government soon introduced a three-phased reopening plan starting on May 14, 2020 (Government of Alberta, 2020b). However, according to Government of Alberta (2020b), Calgary was experiencing higher case rates than the rest of the province at this time, therefore it joined more gradually, and had fully joined Stage 1 by June 1, 2020. In the first stage, some businesses were permitted to reopen such as hairstylists, restaurants, and cafes, but pools, gyms and theatres remained closed. Moreover, social gatherings were permitted for 15 people indoors and 50 people outdoors. The second stage, beginning on June 12, 2020, saw the lifting of more restrictions such as the reopening of wellness services, gyms, and casinos. Moreover, social gatherings of 50 people indoors and 100 people outdoors were permitted.

The COVID-19 infections remained low for the summer but began to rise in the fall, and therefore the province never reached the third phase of the reopening plan. At the end of October, the provincial government reduced social gatherings back to 15 people, and in the weeks after implemented restrictions for the cities of Edmonton and Calgary, because of fast growing case counts (Government of Alberta, n.d.-c). By the middle of November further restrictions on fitness facilities and alcohol sales were implemented (Government of Alberta, n.d.-c), and at the end of November complete restrictions on indoor gatherings were instigated (Government of Alberta, n.d.-d). This called for no close contacts outside of the home, apart from individuals who lived by themselves. These individuals were permitted two close contacts. Moreover, outdoor social gatherings were restricted to 10 people, junior high and high schools went back to online learning (elementary schools were permitted to be in-person up until Christmas break), gyms were forced to close, and retail shops reduced their capacities, but restaurants could remain open but only allowed individuals from the same household to dine in. Lastly, on December 8, 2020 all outdoor gatherings were restricted and restaurants were forced to close (Government of Alberta, n.d.-e).

The restrictions of the second wave saw a slower pace of lifting than the first wave, as they lasted until January 18, 2021, when again, they were lifted starting with the permittance of outdoor social gatherings and wellness services (Government of Alberta, n.d.-d). In February, more restrictions were lifted, those being restaurants opening for people of the same household and one-on-one fitness classes (Government of Alberta, n.d.-d). By March 8, 2021 nearing the end of my data collection period, retail businesses were allowed to increase their capacity and low intensity sports could also begin again (Government of Alberta, 2020a). Having discussed the COVID-19 pandemic policy landscape, I now move on to the SUP policies impacting Calgary.

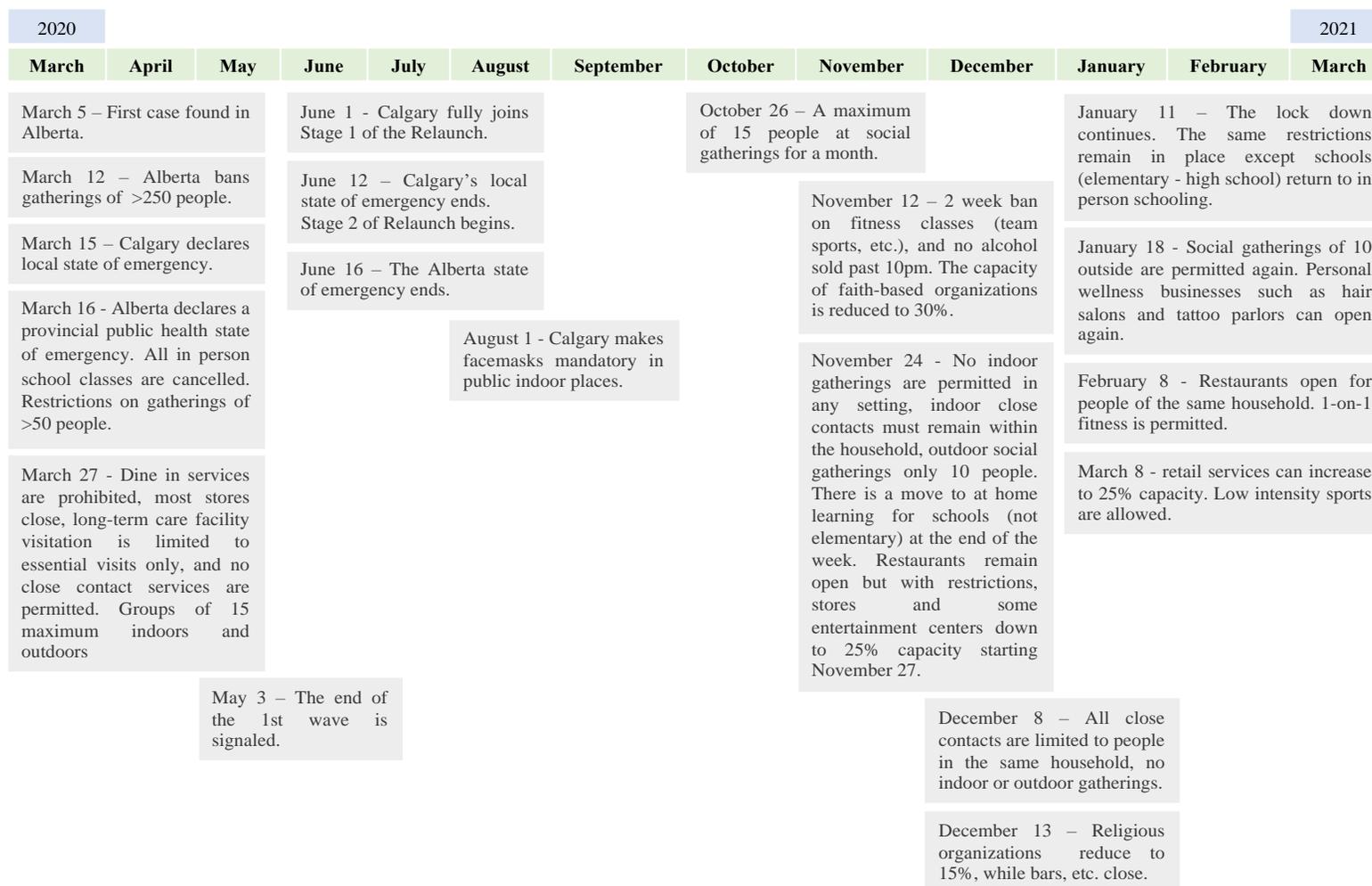


Figure 4.1 COVID-19 Policy Timeline. A timeline of the COVID-19 restrictions implemented by various government bodies from March 2020 - March 2021. This timeline is not comprehensive, but rather provides a visual representation of some of the daily changes experienced throughout the pandemic. This timeline is a combination of information gathered from various sources, these sources are: Herring (2020) for dates on the timeline ranging from March 5 to 16, May 3, and June 16, 2020; Government of Albert (n.d.-b) dates March 16 and March 27, 2020; Government of Alberta (2020b) for the Relaunch Strategy on June 1 and 12, 2020; The City of Calgary (2020) for August 1, 2020; Government of Alberta (n.d.-c) for dates October 26 and November 12, 2020 and January 11, 2021; Government of Alberta (n.d.-d) for dates November 24, 2020 and January 18, and February 8, 2021; Government of Alberta (n.d.-e) for December 8 and 11, 2020; and Government of Alberta (2020a) for March 8, 2021.¹

¹The information gathered from Government of Alberta sources was gathered from a live website, and therefore the URLs provided in the reference list may no longer be up to date. A web archive has captured much of the information provided in this timeline and is available at: https://web.archive.org/web/*/https://www.alberta.ca/coronavirus-info-for-albertans.aspx .

4.3. SUPs in Canada and Calgary

To understand the provisional systems of SUPs, it is useful to illustrate the current policy landscape(s) concerning the production and consumption of SUPs in Canada and Calgary. Alongside many other countries, policy makers in Canada are working to reduce SUP waste and their overall use. There is more than one level of government working on reducing SUP consumption and here I discuss the approaches of the federal and the municipal governments to reduce the use of SUP items. The combined work of these two governments is still relatively primitive, having just begun in the last years. Importantly, in the following section (section 4.4) I discuss SUP disposal systems, which is a form of policy indirectly related to SUPs, but I separate it from the discussion in this section because it is not implemented with the express intent of improving the sustainability of SUP consumption.

The Government of Canada's policy on SUP consumption is quite recent, and therefore likely does not have a large impact on the data collected for this study. Nevertheless, these policies provide valuable knowledge about the state of the SUP policy discourse in Canada. On October 7, 2020, the Government of Canada published a news release announcing their plan to "achieve zero plastic waste by 2030" (Environment and Climate Change Canada, 2020). This plan includes a ban on select SUPs and the regulations surrounding this plan are set to be finalized by the end of 2021. The SUPs which are set to be banned are: "plastic checkout bags, straws, stir sticks, six-pack rings, cutlery, and food-ware made from hard-to-recycle plastics" (Environment and Climate Change Canada, 2020). In addition to the ban on these select SUPs, the government also added "plastic manufactured items" to schedule 1 of the Canadian Environmental Protection Act, (1999) (CEPA) in April 2021 (Canada Gazette, 2021; Environment and Climate Change Canada, 2020). Substances and materials listed under schedule 1 of CEPA are classified as toxic, which is defined by the fact that they "cause, or may cause, immediate or long-term harm to the environment, biological diversity or human health", and when classified they can more easily be regulated and limited (Blaze Baum, 2020). This change has drawn criticism from the chemical industry (Blaze Baum, 2020) and the Alberta government. Specifically, the Alberta government has argued that this designation could negatively impact the province's plans to diversify their plastics and petrochemical industry, and particularly, their plans to become a hub for plastics recycling (J. Keller, 2020). The Alberta government is currently working to create an extended producer responsibility program which would work to retain the value of plastics and keep them "out of the landfill" (*Extended Producer Responsibility (EPR) for Packaging, Paper Products, Single-Use Plastics, as Well as Hazardous and Special Products*, n.d., p. 5).

In addition to the federal government, Calgary's municipal government has also been working on a "Single-use Items Waste Reduction Strategy" (The City of Calgary, n.d.-f). This is where the contextual interview conducted with Sara, an employee working for The City of Calgary, comes in. This interview covered the topics of the single-use item strategy and waste disposal in Calgary, and the contextual information from this interview is used to provide information about the SUP policy landscape in Calgary. The development of the municipality's Single-use Items Strategy began prior to the press release of the Canadian government, and upon this release, the municipality decided to slow down their work on their strategy until they received more information from the federal government (Sara, interview). Sara explained that Calgary's plan is dependent on the decisions of the Canadian government, and therefore, it is a better use of their

resources to create a plan that is in line with the plan of the Canadian government. Moreover, the pandemic also impacted the progression of the strategy, slowing down in part because of the economic and financial difficulties brought on by the pandemic (Sara, interview); specifically, due to the reasons of stress on businesses and the changes in behaviour and safety of people. The result of these delays is that Sara was unable to provide detail on the Single-use Item Strategy, apart from their aims to “harmonize” their strategy with those of other municipalities in western Canada, and to work with local businesses to implement a strategy that aligns with the needs of business owners in Calgary (Sara, interview).

While not implemented by governments, the COVID-19 pandemic saw the temporary discontinuation of the use of certain reusable materials (specifically, grocery bags and reusable coffee mugs) by private businesses such as grocery stores and cafes. Each of these changes were implemented by individual businesses, therefore it is difficult to give a comprehensive overview of these policies. However, a specific example comes from Save on Foods, a grocery chain in Canada (Cunningham, 2020). The author explains that the company chose to “temporarily suspend the use of environmentally friendly reusable bags and [instead] hand out plastic bags” due to increasing worries from their employees and customers. Moreover, large coffee chains such as Starbucks, Tim Hortons, and Second Cup also implemented a similar policy for reusable mugs to reduce the chance of virus transmission (Shah, 2020). Next, I discuss disposal infrastructures in Calgary, and how SUP disposal fits into these infrastructures.

4.4. Disposal of Waste in Calgary

Disposal infrastructures have a key influence on the environmental impact of SUP consumption, and therefore, it is useful to describe to readers how the disposal system in Calgary is configured. There are several programs that contribute to Calgary’s overall waste disposal system: residential waste disposal, commercial waste disposal, and provincial recycling systems. Together these infrastructures create a tangled web of SUP disposal mechanisms, and in this section, I describe each of these infrastructures and how they relate to SUP disposal, starting with residential waste.

Citizens in Calgary are able to dispose of their waste through the city’s residential disposal program. As part of their waste diversion goals, The City of Calgary implemented a 3 colour disposal system which includes black, green, and blue carts for garbage, compost, and recycling respectively (The City of Calgary, n.d.-a). Each of these three disposal streams has been phased in at different times over the last 12 years, blue-bin recycling starting in 2009, automated garbage pickup beginning in 2010, and compost beginning in 2017 (The City of Calgary, n.d.-b). Of note here, and important for understanding disposal systems for SUPs, is the recycling program. When implementing the recycling and composting systems in Calgary, household garbage was reduced by 50% from 2007 to 2019 (The City of Calgary, n.d.-c), however, it is important to note that there are various requirements for the proper sorting of waste in Calgary. Figure 4.2 provides a visual representation of how to sort residential waste in Calgary.

In regard to SUPs, the requirements for recycling plastic can be loosely categorized by material, size, and cleanliness. First, there is a difference between the recyclability of plastic materials, as if they pass the “stretch test”, they can be recycled (The City of Calgary, n.d.-d, p. 10). For example, stretchy plastics can be put in the blue bin, but rigid plastics cannot (The City of Calgary, n.d.-d).




Quick Reference Guide

 Green Cart Food and yard waste	 Blue Cart Recycling	 Black Cart Garbage	Other Disposal Options
<p>Food scraps</p>  <p>Yard waste</p>  <p>Food-soiled paper</p>  <p>Pet waste (in a compostable bag)</p> 	<p>Paper and cardboard</p>  <p>Plastic containers</p>  <p>Bundled plastic bags</p>  <p>Food cans and foil</p>  <p>Glass jars and bottles</p> 	<p>Foam packaging</p>  <p>Rubber hoses</p>  <p>Mixed packaging</p>  <p>Diapers</p>  <p>Plastic cutlery and straws</p>  <p>Lotion and toothpaste tubes</p> 	<p>Household hazardous waste</p>   <p>Electronics</p>  <p>Toys</p>  <p>Clothing</p> 

If in doubt, check it out.
 Find recycling, composting and safe disposal answers for hundreds of items at calgary.ca/whatgoeswhere
 Get your schedule and reminders so you never miss a collection day at calgary.ca/collection




20 Your guide to cart collection | Green | Blue | Black
Printed on recycled paper.

Figure 4.2 A sample of a the “Quick Reference Guide” information sheet. This sample is provided by The City of Calgary (n.d.-d). This sample shows the correct disposal of various waste items including some SUPs. This image was retrieved to be used as an informational sample and has not been altered.

Many containers that are marked with the numbered triangle from 1-7 can also be recycled (The City of Calgary, n.d.-d), despite being a rigid plastic. However, mixed materials such as chip bags and Styrofoam cannot enter the blue bin (The City of Calgary, n.d.-e, n.d.-i). For chip bags this is because their materials cannot be properly separated (The City of Calgary, n.d.-i), while Styrofoam breaks into small pieces when sorted (The City of Calgary, n.d.-e). Second, the size of the material impacts its recyclability because some materials are too small or light to be sorted, such as the coffee cup lid (The City of Calgary, n.d.-h). Third, the municipal system also requires that all recycling in the blue bin be clean and dry (The City of Calgary, n.d.-d). SUPs come in many shapes, sizes, and materials, and therefore some can be recycled in the blue cart system, while others cannot.

Though it might not be completely intuitive, the compost cart is also relevant for understanding SUP disposal. Many food items, including meat and bones, as well as food-soiled paper products such as paper towels, can be composted (The City of Calgary, n.d.-d). However, some plastic takeout items that are labelled as compostable, such as cutlery, cannot be composted in the municipal composting system and must be put in the black cart instead (The City of Calgary, n.d.-g). There are exceptions to this distinction, such as the compostable grocery bag provided by local retailer, the Calgary Co-op. According to Sara, prior to providing the item to consumers, the Co-op reached out to the municipality to test if their materials were compostable in the City's composting facility. The fact that not all materials that are labelled as compostable can properly be composted in the city's facilities could incline the reader to question why compostable materials are used by vendors. However, as Sara described, some private waste haulers are able to process items labelled as compostable, highlighting the difference between residential and commercial waste programs in Calgary.

Private companies such as restaurants, stores, and malls can choose their commercial waste to be collected by private collection haulers or public haulers (Sara, interview). But according to Sara, private haulers are the more popular choice amongst businesses. She described that some businesses are keen on ensuring that they reduce their environmental footprint and, therefore, they have lined up their material provision in a way that matches an opportunity for appropriate waste disposal. For example, this is done by using compostable food items and by utilizing the services of a hauler who can compost these materials properly.

Lastly, deposit recycling adds another layer to the disposal system in Calgary. With deposit recycling, consumers pay a small upfront "container recycling fee" on various drink containers such as plastic bottles, pop or beer cans, wine bottles, juice boxes, and milk jugs (Alberta Depot, n.d.). The fee is either \$0.10 or \$0.25 (in Canadian dollars) and depends on the size of the bottle. When empty, consumers can then return their drink containers to various recycling depots to receive this deposit back. This program runs on the provincial level, is governed by an autonomous agency (Alberta Depot, n.d.), and has been in place considerably longer than the blue cart disposal system in Calgary, beginning in the 1970s (Alberta Beverage Container Recycling Corporation, n.d.). The combination of each of these infrastructures creates a dynamic disposal system in Calgary, each influencing the environmental impact of SUP consumption in their own way. Evidently, there are many competencies for consumers to know and understand concerning their SUP disposal. Having discussed the local context of Calgary, the next chapter acts as the first of three chapters that discuss the majority of the primary data collected for this research.

5. Findings 2: What do Practices of SUPs Consumption Look Like?

5.1. Introduction

This chapter dives into the practices that consume SUPs. Specifically, this chapter focuses on situated practices and the variations in, and dynamics of, practices when they are performed in different settings (Figure 5.1). During the data analysis phase of this research, the practices of SUP consumption found in this data were split into their elements, the links and dynamics between these elements studied, and the changes that occurred due to the COVID-19 pandemic were examined. The findings show that plastics are engrained into these practices, but also that SUP consumption is dependent on the situational setting and the alternatives that are available in the practice. Additionally, the results show that practices have been impacted by the COVID-19 pandemic, changing the frequency at which these practices are performed and that a new practice has emerged. As mentioned in the methodology chapter (Chapter 3), I would like to remind the reader, that the remaining findings chapters (including this chapter) are split into sections where the changes of the pandemic are not directly discussed, and sections where they are directly

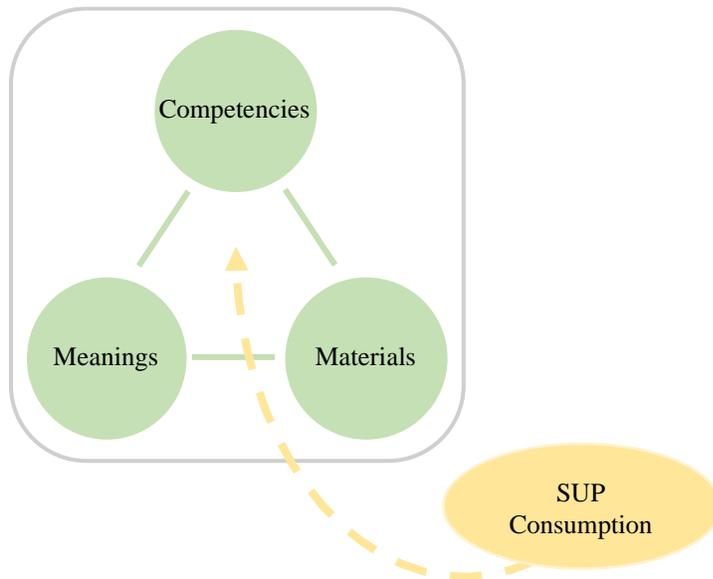


Figure 5.1 SUP Consumption in practices. This chapter focuses primarily on the relationships in the center of the conceptual diagram (pictured here). These relationships being the relationships between the elements of each practice and how SUP consumption fits into this. In the COVID-19 section of this chapter, I will also discuss other elements of the conceptual diagram that refer to the impact of lifestyles and systems of provision.

discussed. For the practices in the former, it is important to note that these practices still occurred during the pandemic, even though I do not directly discuss the changes of those practices in that section.

This chapter is split into five sections. It begins in section 5.2 by outlining the practices that have surfaced as practices of SUP consumption. It then switches its attention to three exemplary practices, grocery shopping, takeout, and getting coffee and their situational occurrences in section 5.3. Section 5.4 discusses how SUPs provide an element of convenience to practices and section 5.5 focuses on the changing dynamics of these practices as seen as a result of the pandemic. Lastly, section 5.6 discusses the emergence of a new practice, the widespread act of wearing face masks.

5.2. Mapping Practices of SUP Consumption

As per the data of this research, this section names and outlines the practices that consume SUPs, which SUPs are consumed, and how the SUPs are consumed. In total there are nine practices of SUP consumption that became evident in this study, each distinctly different in the SUP

consumption that occurs through their accomplishment. SUPs are consumed as unavoidable packaging, are used to hold materials conveniently, and/or are necessary in order to complete activities at work. The various functions that SUPs provide to practices demonstrates the varying degrees of necessity of SUP consumption in practices, ranging from unavoidable to convenient, and the strength of their integration into the practice. Though the practices of grocery shopping, takeout, and getting coffee are closely related to, and sometimes overlap with, the practices mentioned in this section, they are not included here. This is because I have chosen for them to become the focal point of the rest of this thesis. That is, these practices are introduced and elaborately discussed in section 5.3, throughout the rest of this chapter, and the remaining results chapters of this thesis. Moreover, the practice of mask wearing is not included in this section either but is discussed towards the end of this chapter.

5.2.1. Food Preparation and Food Storage

SUPs are consumed through practices of food preparation and food storage. To illustrate this, I use the example of packed lunches, including their preparation and storage throughout the day, to show how SUPs in this practice are utilized. The SUPs consumed in this practice are often zipper-sealed bags, plastic wrap, and prepackaged foods. The examples below show that SUPs are consumed for their use within the practice because SUPs make it easier for agents to perform their practices.

When packing a lunch, different SUPs have different uses, are consumed for different reasons, and are reused (or not) for different reasons. For example, in some cases zipper-sealed bags are used to hold food, and thereby consumed, while in other cases reusable plastic containers are used. For one participant, Debra, this depends on the time she has in the morning, as she explained that she is more likely to throw some cookies in a bag as she is heading out the door for “total convenience” (Debra, interview 2). Conversely, for Nina, she often uses zipper-sealed bags for her husband because he works on-the-go, and they fit easier in his lunch bag. Here, the use of SUPs creates an element of convenience as agents are not required to keep track of their containers. Moreover, there are also environmental elements involved in the practice of packing lunch.

Participants indicated that they do occasionally reuse certain SUPs and that they are aware of the environmental impact that may occur through this practice. Specifically, the choice to reuse a zipper-sealed bag depends on the size and previous contents of the bag. As for reusing her bags, Debra explained,

I usually wash up the big ones, except [if] they've had raw meat in them. And then I just, I can't go there. I don't know that I feel like I can ever clean that well enough. The freezer bag, little ones which are sturdier, I do wash out. ... And it's because they're sturdier. But the usual little cheaper Ziploc bags ... they seem harder to wash out. They're not that heavy ... So yes ... I am going straight to plastic hell. (Debra, interview 2)

Debra was not alone in this activity of washing her bags, and other participants also explained that they wash and reuse their bags from time to time, often avoiding reuse if products such as meats have been in them. Moreover, relating to avoiding use, Nadia explained that she previously used zipper-sealed bags in her lunch, but upon seeing her friend consciously use reusable containers, she realized it would not be very difficult for her to do the same thing. This example is interesting because for Nadia, to change the use of her bags to a reusable container was not difficult, highlighting the possibilities of change in SUP consumption related to lunch preparation. As is

demonstrated throughout this chapter, the substitution of a SUP for a reusable material is not always easy or convenient for other practices, SUPs, and agents.

5.2.2. Mobility

In this thesis, I define mobility as the time spent moving between locations usually done by walking, biking, public transit, ridesharing such as Uber, scooters and/or bicycles, and driving. As per the diary entries completed by the participants, it is evident that minimal SUP consumption occurs in the time that participants are mobile during their days. Instead, mobility serves as a key connection between SUP consumption practices. For example, participants often drove to a store, to work, or to a drive thru, and then consumed SUPs through participating in practices that occur at these locations.

The first two of these locations often involved SUP consumption in the completion of the activities performed at these locations but did not lead to consumption while being mobile. The third option did include an aspect of consumption, as became evident through analyzing the mobility section of the diary entries. Here, participants sometimes wrote that they bought and took coffee along on their trips. Particularly this consumption occurred because this practice includes going through a drive thru, often involves buying, for example, a coffee, and drinking it while driving. In this case, the coffee cups and lids that come with the coffee enable the possibility to be mobile and enjoy a cup of coffee at the same time. The use of a plastic cup is a convenient way of doing these practices together, and thus it is consumed in the practice of mobility while also constituting its own practice.

5.2.3. Variations of Shopping

Through the analysis of interviews and diary entries, it quickly became apparent that varying forms of shopping lead to the consumption of SUPs. In total, three forms of shopping (instore, online, and grocery shopping) are discussed throughout this thesis, however grocery shopping is excluded from the current discussion as it is detailed throughout the remainder of this paper. These shopping practices were not the focus of the interviews but were discussed anyways, emphasizing a practice that participants saw as an important factor in their SUP consumption.

Through the participation in instore shopping practices, packaging and plastic shopping bags are key SUPs that are consumed. However, these SUPs have different purposes and are consumed with varying degrees of willingness. Specifically, Debra explained her dismay for the increasing volume of packaging that her purchases are encased in. Conversely, Vince detailed his process of choosing to take a bag while shopping by himself or with a friend. The following highlights elements of ease and socializing, both of which impact SUP consumption in shopping. Vince stated that when with a friend, he was more likely to take a bag than when by himself for several reasons. When asked why he explained, “Probably because we would have planned to do something else. And I didn't want to have to carry that box of [materials] around in my hand, like just for pure convenience” and additionally, “If I had the bag, I might say to someone ... who was with me... ‘Oh, well don't get another bag, just put it in here.’ ... we don't have to have two or three bags.” (Vince, interview 2). In this case, Vince explained he is more willing to take a bag when he is with a friend because of the activities that they will likely do afterwards, instead when he is by himself, he often just stops to pick up an item and leaves immediately.

Regarding online shopping, this project saw seven cases of online shopping during the week(s) the diary entries were completed, six of which included at least one component of plastic packaging. The amount of plastic packaging is seen to be in excess by Nadia and Nate, but they understood the purpose of this packaging to be to protect the materials and objects which they purchased. Given the excess packaging, Nina and Nate described the ease of online shopping, and the possibility of avoiding the “hassle” of shopping during the COVID-19 pandemic (Nate, interview 1; Nina, interview 2) as major contributors to their choice to continue online shopping, despite large amounts of packaging that came with their purchases. What this shows, is that in the practice of online shopping, there are other factors that are more important to the participants than the overall impact of their consumption practices.

5.2.4. Work

It is apparent that some participants come across SUP while at work, and in light of COVID-19, this has increased. This is because many participants in this sample work in healthcare, a discipline where a lot of personal protective equipment is used. Participants described that their SUP consumption at work increased, but also said that it was comparatively minimal before the COVID-19 pandemic began. This is a direct impact of COVID-19, as outside of the pandemic this consumption would not have occurred. Additionally, two other participants, who work outside of healthcare, explained that they see SUP packaging, such as for car parts and fluids, during their workdays and that they require use to fulfill the tasks of their job. In contrast to the healthcare workers, these participants did not describe there to be a large increase in the SUP consumption, apart from some extra sanitation, wearing a face mask, and occasionally wearing extra plastic gloves.

There is no discernable pattern in the consumption of SUPs while at work due to the variety of occupations that make up this sample. However, it does offer an interesting area of future research, as detailing the areas and occupations which consume more SUPs than others can highlight areas for change.

5.3. Understanding SUP Consumption in Three Exemplary Practices

When coding the interview and diary entry data, it became apparent that grocery shopping, eating takeout, and drinking coffee are practices that were mentioned most often by participants in regard to their SUP consumption. Accordingly, these practices can then be characterized as mundane practices that many people perform regularly. Due to the mundane nature of these practices, and in addition, my own personal interest in these practices, I choose to pay special attention to these three practices. I will focus on them almost exclusively for the remaining discussions in this chapter as well as the next two chapters. As such, this section details how three exemplary practices of grocery shopping, eating takeout and drinking coffee occur in different settings as to show how the characteristics specific to each practice can lend them to be stable, versatile, or open to change. The situated descriptions of practices also demonstrate how plastics are engrained into the practice and if and/or how a practice is open to positive environment-friendly change. Using the information that emerged from splitting the practices into their elements, and the theoretical foundation for studying change in practices, each of the following subsections detail the practice,

which SUPs are consumed in the practice, and then discuss the different situations in which each practice occurs. Moreover, the subsections elaborate on what those situations mean for SUP consumption and the practitioners by focusing on the use of alternatives that replace plastics.

Though the practices of grocery shopping, eating takeout, and getting coffee have SUPs deeply engrained into them, this research shows that available, reusable, alternatives are integrated into them in various ways. By focusing on the different stories of the three practices, the circumstances in which alternatives may or may not be used are illustrated.

5.3.1. Grocery Shopping

The practice of grocery shopping is a mundane practice that was completed by every participant in this study. This routinized practice did not, in most cases occur every day, but generally participants went to the grocery store one to four times a week during the week(s) they recorded their practices in their diaries. In general, the specifics of the practice of grocery shopping were not largely discussed in interviews, rather the conversations generally revolved around the SUPs that are utilized in this practice. There are several SUPs used in the practice of grocery shopping, ones most often consumed being: grocery bags, produce bags, plastic packaging, and produce stickers. In the following text I use the dynamics of grocery and produce bag consumption, and the situational occurrences of grocery shopping, to illustrate how different situations can lead to different SUP consumption. Moreover, the materials of SUP packaging and produce stickers is largely omitted from this section as I will discuss them in depth in Chapter 6 in relation to how they are a display of environmental beliefs and intentions.

Now I turn my discussion towards grocery and produce bags, two items that have proven to be vital to the practice of grocery shopping. What distinguishes these items from other SUPs is that these are alternatives that act as substitutions to replace SUPs. Regarding grocery bags, actors generally have a variety of choices in how they would like to pack their groceries. The results show that they can use plastic, compostable, paper, or reusable (generally cloth) bags, or they can carry their products out without a bag. For produce bags, there are SUP bags or reusable bags available, or individuals have the choice to use no bag at all. However, the extent that plastic bags are switched out for other options depends on several factors such as the reason for which the individual is shopping, and the products they are buying. This is exemplified by discussing different performances of grocery shopping.

According to the interviews and diary entries, grocery shopping is done for different reasons and during different parts of the day. I distinguish these differences to be between big and small, and planned and un-planned shops. As such, 'big' shops often involved going to different stores than for 'small' shops and were more often planned into the participant's days. Additionally, smaller shops were often described as, for example, stopping after work to pick up odds and ends before heading home. As a result, the reason for, and time of, shopping has implications for the SUPs that are consumed during the practice because the participants in this study purchased different materials and brought their reusable bags to the store in varying degrees depending on the purpose of their shopping.

Participant Nina, detailed in one of her diary entries a time that she shopped at a large store. This specific trip, which she explained she does only a few times a year, involves more plastic compared to when she is at a store buying smaller portions of food. The following excerpt provides an overview of the SUPs consumed, but also the feelings Nina felt because of her shopping,

[T]oday was the first time I noticed all of the single use plastic packaging. It was very apparent to me that almost everything I purchased came in single use plastic packing and sometimes multiple layers of it. Toilet paper came in a large pack with plastic around the outside to hold it all together, but then inside the rolls themselves had another layer of plastic wrapping that really had no purpose. I purchased dishwasher tabs that came in a heavy plastic container, individual servings of yogurt cups (plastic), a large pack of eggs which was in a plastic carton, some fresh flowers that were wrapped in plastic and then I proceeded to place them in a plastic flower bag to avoid the water dripping everywhere. There were a few more items in my cart such as coffee, lunch meat and some granola bars which has some sort of plastic involved in their packaging but nothing like the previous ones I mentioned.

While I was shopping around ... I was very aware of the amount of plastic sitting in my shopping cart that I knew was going straight into the garbage bin when I returned home. And even though ... I can't help but buy in plastic, it is still alarming. When I do my regular grocery shop, I usually choose to buy individual apples as opposed to a plastic bag of apples and the same with peppers or oranges, but lots of "pantry and household" items are packed in unavoidable plastic. (Nina, diary entry)

In addition to SUPs and feelings, something else is present in this quote and that is Nina's increased awareness of the plastics that came with her purchases. This is not a phenomenon only present in grocery shopping, and Nina is not the only participant who became more aware throughout the data collection period. What this does show is that much SUP consumption may not be in the discursive consciousness of participants.

Moreover, when doing an unplanned shop, participants often mentioned that they were more likely to forget their reusable grocery bags, showing that this competency acts as a barrier to going green. When asked to expand on this, they mentioned that they generally do not carry their bags with them throughout their day, signalling that taking your own bag to the store involves extra thought and preparation. Nadia explained,

So, I would typically bring my like reusable bags when I'm doing a big grocery haul. But since I wasn't the primary grocery shopper in the house, I would only go out to buy like odds and ends when my mom would ask me to or when I wanted them. And that usually wouldn't be done on like a planned grocery trip. It would be when I had the time and when it was convenient for me. So that way, I didn't plan and ...therefore didn't have those bags in my car. (Nadia, interview 2)

Participants did not use reusable produce bags as often as reusable grocery bags, for various reasons: they are provided by the store for free, they have not thought about it, and because it is not the same replacement as a reusable cloth bag to a plastic grocery bag. The use of alternative produce bags is not dependant on the situation in which participants are shopping, but the cases in which alternatives are chosen does show us that substituting a material does not always lead to uptake in a practice. In the case of produce bags, uptake is contingent on the competency of

remembering the bags, social pressure and related environmental footprint, and the utilization of the material.

Some grocery stores charge a small fee for grocery bags which, to Debra, showed that grocery stores are putting in a conscious effort to reduce their grocery bag consumption. However, produce bags are provided for free and are readily available. In our interview, Mandy, explained that she did not see a reason to bring her own when they are available, “[The grocery stores] have the single use produce bags. We use that because it's there. It's there for you to use ... So, then Why?” (Mandy, interview 1). For Nadia, it is this, plus the fact that she did not need to remember other bags,

It's provided by the store too, like, I don't need to worry about bringing my own, [its] just easier. I don't need to go to the effort of ... buying reusable produce bags, I guess. Like, it's just the easiest option. It's there for me already...like, almost why wouldn't I? (Nadia, interview 1)

However, Janice, who just recently started using these bags, said that for her it was not difficult to switch as she put them with her other grocery bags, and instead it alleviated other annoyances of produce bags,

[Now I] don't have to struggle with trying to open up this plastic bag ... trying to do that without, you know, [you] can't lick your finger to open the bag anymore [due to COVID-19]. And so, they've been good ... It's just another... I just keep them in with my grocery bags, which again, sometimes I forget my grocery bags and then have to use some from the store. (Janice, interview 2)

This brings up the second reason of why produce bags are not as widely used while grocery shopping. While cloth grocery bags have been around for longer, reusable produce bags are relatively new, and some participants have never thought about adding this into their practice, as Nadia put it, “I've never even really like thought about bringing my own bag for produce, which honestly, [why] haven't I thought of that?” (Nadia, interview 1). This quote nicely exemplifies the relationship between a change in the material element of grocery shopping and the competencies of remembering to bring a bag, or even having the thought of bringing a different bag. In this quote, Nadia, seems to have the revelation that this is an option, showing a lag between a change in one element and how it is shaping another element. However, it also shows a moment of discursive consciousness where, for Nadia, this might lead to a change in her practice to reduce her SUP consumption. As such, it also shows the positive changes that are occurring in the practice of grocery shopping ‘as we speak’.

Lastly, through discussing the purpose of produce bags, and how participants use them while grocery shopping, it is evident that alternative produce bags do not have the same utility as plastic bags. This shows that a change in material does not always lead to a linear change in a practice. The use of these bags was discussed to be for the purpose of holding produce together. However, as Vince discussed, sometimes foods can be wet, and reusable mesh bags do not offer the same protection as plastic bags, therefore reusable bags are only used for certain produce and not all produce, for example, “[a]pples usually go in a mesh bag, and it's generally things that are wet, like broccoli ... that I'll put into a plastic bag so that it's not getting everything else wet.” (Vince, interview 1).

It is evident that the changes in practices of grocery shopping are contingent on many moving parts, but it is also evident that the practice of grocery shopping is constantly changing and evolving to different, in some cases, less SUP consuming versions of itself.

5.3.2. Takeout

Eating in a restaurant, ordering delivery from a restaurant, and getting fast food (from a fast food chain or café) are three closely related situations, the latter two of which I classify as takeout. To avoid confusion, in this section I call the process of ordering food and having it delivered ‘delivery takeout’, and I call the purchase of fast food or food from a café ‘fast food takeout’. The participants in this research explained that they often ordered delivery takeout to their house or at work and that this included ordering food to eat with their family or coworkers. Relatedly, ordering fast food takeout by going through a drive thru was sometimes done as an outing or to get a quick bite to eat. Moreover, participants explained that they often ordered takeout through apps such as Skip-the-Dishes, and that these apps add to the ease of takeout. Delivery takeout was often ordered when participants wanted a night off cooking and/or when they wanted to eat something that is different for their pallet, as participants stated that they ate out because they were tired or feeling lazy that day, and thus, eating out in a restaurant or ordering takeout alleviated the need to plan to cook a meal. According to their diary entries, the participants in this sample ordered either type of takeout zero to five times, ordering mostly for dinner. However, along with takeout comes the consumption of SUPs.

By participating in delivery takeout, many different SUPs were often consumed because when actors order takeout, SUPs are included in their order and are used and disposed of. Specifically, from the interviews and diary entries it can be inferred that straws, packaging, cutlery, pop/water bottles, and condiment packets are among the SUPs consumed in practices of takeout. These SUPs are provided by the restaurant as part of the meal and the amount and types vary immensely depending on the type of food and at which restaurant the meal is ordered. For example, Chinese food and shawarma are well known for their use of Styrofoam takeout containers, pizza comes in a cardboard box which is sometimes accompanied by a plastic bag, some family restaurants provide their food in black plastic takeout containers while others provide their food in plain cardboard boxes or plastic-lined cardboard packaging, and fast food packaging is variable as it can involve foil, paper, or plastic. As is apparent by the variety of packaging used, which sometimes, but not always, includes SUPs, it is difficult to know which packaging is involved in every takeout order.

Participants indicated that when ordering food, they are often provided plastic cutlery, straws, and condiment packets. Moreover, often in scenarios of delivery takeout, plastic cutlery is provided, but participants explained that it often remains unused and is thrown out. Though it is not utilized by the practitioner, this SUP is still consumed through the performance of the practice indicating a loose link between plastic cutlery and the practice. This is because it is not necessary to include cutlery in many cases, and therefore it is possible that instances of unused cutlery could be avoided by not providing them with every meal without any negative consequences for the consumer.

In addition to the loose link between cutlery and performance, the variety in packaging also tells us about the nature of plastic packaging in practices of takeout consumption. Indeed, the variable

packaging indicates that these materials are easily substitutable to each other, and unlike the previous case of the produce bag, an environmentally friendly alternative may be easily accepted. However, participants did not indicate that they were aware of, or used any alternatives to SUPs when ordering takeout, apart from replacing plastic cutlery with reusable cutlery. This results in the finding that, currently, avoiding SUPs in takeout is avoiding the practice in the first place. From this it can be inferred that, if avoiding the practice is the only way to avoid SUPs, then the way that the practice is currently configured is stable in relation to SUP consumption.

By examining the situational practice of eating takeout, it became evident that the different execution of the practice prescribed different meanings and competencies to the practice and impacted how the materials are disposed. Here fast food takeout was detailed by two participants. One participant, Nadia, described her reasoning for ordering fast food, and how mobility impacted this. She described that her decision to order fast food was often because she wanted a quick bite to eat, because she didn't want to cook, or because she wanted comfort food. Additionally, she described her mood and location to impact how she disposed of her waste,

[I]t may be because I am working full time now to that I'm like, 'Oh, I just want something quick and like, I'm tired. I want yummy food'. But I have been getting takeout more. And takeout can be pretty bad too because I know within the takeout, you can recycle lots in there. But like with the takeout, you just shove it all back into that brown bag and then just toss it out. As soon as you get out of your car in the first garbage you see. (Nadia, interview 1)

Here it is evident that the meanings prescribed to the practice of fast food are different than delivery because of its mobile element. Moreover, her mood and her mobility impacted her behaviour in a way that affected the disposal of her materials negatively. Instead of taking the time to recycle her waste properly, she took the simple way out and put it all together in one bin. This being said, Nadia did explain that if she orders fast food on her way home, she will often sort through her waste and recycle the materials that she can when she gets home. The difference in disposal is dependent on circumstance, and this topic will be discussed further in Chapter 7.

Relatedly, participant Debra described her decision to buy soup or a salad for lunch at her workplace, which she often did in combination with bringing other parts of her lunch. For Debra, her recent choices were impacted by the COVID-19 pandemic as her choices for her takeout were reduced due to closures in the pandemic. This shows how the competencies and meanings are different from delivery and have changed with COVID-19. Specifically, her inability to buy food as easily shows different competencies in remembering to pack at least a partial lunch for her day.

As noted above, ordering takeout does not automatically include SUP packaging, but often there is a SUP item involved in ordering fast food, such as cutlery or condiment cups. When compared to SUPs in delivery takeout, it is difficult to know from this sample what differences there are in SUP materials between the two performances of takeout. Instead, the difference between the two situations comes from their mobility and disposal options, which impacts the use of available alternatives and how SUPs are used in this practice. For example, when mobile, it may be more necessary to include plastic cutlery, as an actor will want to eat on the go, making it difficult to include reusable cutlery without adding additional competencies. The practice of getting coffee is also a practice that can be heavily impacted by mobility, as will be discussed in the following subsection.

5.3.3. Getting Coffee

The practice of ‘getting coffee’ deserves some explanation. In this research, the practice of getting coffee is described as consuming coffee and/or tea, whether hot or cold. These beverages are generally consumed at a café or drive thru but could be made at home as well. It is not the practice of physically drinking the liquid, instead it is the process of buying or making it, drinking it, and often socializing with others while doing so. To avoid confusion, I refer to this mix of activities and drinks as the practice of ‘getting coffee’. According to the participants, this practice is performed in a variety of settings such as making coffee at home, or buying it at a café or drive thru, and bringing it to work, meeting for coffee with friends, making it at home to socialize, or even buying it and bringing it to a friend as a small ‘gift’.

Many participants discussed their coffee/tea drinking habits, and it quickly became evident that this practice was one that was done often and often involved SUPs, as participants ordered coffee several times per week. Some participants only ordered one cup during their week of diary entries, while others ordered more than five. Several materials are included in this practice, however the focus of discussion in this research was often on the disposable materials of a paper cup and a SUP lid that almost always accompanies the paper cup. Additionally, plastic cups and straws (for cold drinks) and the reusable travel mug were also discussed.

The situations in which actors order or makes coffee have implications for which SUPs are consumed and if alternatives are used. The first situation is one in which participants drink coffee on the go. In some cases, participants noted that they often make coffee at home and take it along to their destination. In these situations, some participants noted and showed in their diary entries that they pour their coffee into a travel mug, which they then take along. In other situations, participants stop to order a coffee at a café or through a drive thru, in these cases participants will often have their coffee in a single-use paper cup along with a lid, and sometimes a plastic stopper. Prior to the onset of COVID-19, some participants would take along their travel mug to the café and ask it to be filled. Moreover, the data of this research revealed that these performances were at times completed by themselves, or in some cases with others. When completed with others it was done as a social outing, either on the way to something or as a way to get outside. When looking at each of these situations, it becomes evident that there can be emotional connections to coffee and the SUPs that come with it, that socializing is an important part of getting coffee and can lead to consuming SUPs, and that mobility is prevalent in the current social practices of drinking coffee. More specifically, when sitting down and socializing, SUP cups and lids can be avoided but when doing a mobile activity such as walking or bringing a cup of coffee to a friend, the mobility and convenience of the throwaway cup and lid become evident. In the following text I will dive deeper into how each of the situations mentioned above express these various meanings, competencies, and materials.

In the first scenario, a few participants noted that they often use their reusable mugs and make their coffee at home rather than buying it because, as according to Janice, they “try to do something about [their SUP consumption]” (Janice, interview 1). For William, it is the idea of avoiding disposables combined with the heat travel mugs retain that motivates him to go to cafes where his mug is allowed, even in times of COVID-19, “But [the cafe] will in fact, you know, fill the travel mug directly. So, you know, we certainly have been frequenting there... just to try to avoid the use

of disposables” (William, interview 1). Conversely, in an interesting discussion, Debra noted her awareness of the use of SUPs in her coffee ordering habits but mentioned that her “creature comforts” and habits stop her from avoiding SUPs,

[E]veryday I get [myself] iced coffee in plastic cup complete with a straw, even though I know [it is not good] ... it's not a lack of knowing, right? And so... that's interesting because I can't plead [innocence], right? Like creature comforts. I know better. I actually have reusable straws. But no, ... I'm gonna go every day and pick that up. And so, I think it's hard ... when you start looking ‘Okay, am I the worst, though?’ Probably not. But there are people better trying to change the mindset of a society that runs off that. (Debra, interview 1)

What is interesting about this quote is her awareness of the issue and her candor on, what she calls, her poor reasoning for her SUP consumption. In this particular exchange, the impact of her creature comforts is specifically evident, highlighting an emotional connection to both the practice and the SUP, and a connection between material elements and meanings of the practice. For Debra, she attains a certain feeling of happiness when she orders her coffee for herself, as she described this, and her regular walks, as her “sanity time” (Debra, interview 1).

In a related example, Vince described the meanings that disposable cups give to him, and the happiness that he feels when ordering a coffee that comes in a paper cup and SUP lid. He explained, I love the feeling of a Starbucks coffee in my hand. It's the ... idea that I'm going to, you know, [that] this beautiful receptacle is going to deliver this most amazing tasting coffee and the I guess they don't even keep the drink that warm. They just they look ... they look good. (Vince, interview 1)

For him, despite confusion about disposal of the cups, this feeling pulls him into the practice and acts as a barrier for him to use a travel mug, even though he described that he also, “Like[s] coffee from [his] YETI [travel mug].” (Vince, interview 2)

These two examples are particularly interesting because they note the emotional attachment that pulls individuals into participating in the practice and consuming SUPs. However, this is not the case for all participants. Nate, who acknowledged that he does not buy coffee often, described his views on the purpose of SUPs in drinking coffee, as only the vessel for it to be possible to partake in the practice, “It's the product really ... that's the reason why you're doing this. It's not because it's plastic or not plastic ... the coffee is the reason why the social gathering happens, right? Not the plastic” (Nate, interview 2). This quote exemplifies, first how SUPs are consumed in this practice, as an enabler of the practice, and second the possibility of no emotional connection to both the SUPs and the practice. Nate then continued,

Why am I going for coffees with [people] at work? Well, it's ... to take a break, to converse with coworkers or clients, and to make business deals ... improve working relationships. And then with neighborhood walks and stuff, it's relaxation. It's decompression, walking, getting a coffee. (Nate, interview 2)

This point leads me to my next finding.

There are various social occasions that occur around a cup of coffee and socializing is much more prevalent here than in the other practices of takeout and grocery shopping. Participants noted that they would go for coffee with the specific purpose to meet up with friends and/or family, or as a something on the side before, and while, engaging in other activities such as going for a walk or

while shopping. This social aspect has implications for the use SUPs and the participation in the practice, as it can draw people into the practice, though it does not necessarily mean that they will consume a SUP. For William, grabbing a cup of coffee is a time to sit and spend time with his wife, and for Mandy, she uses a plastic cup when walking, but not when sitting and socializing with friends. Additionally, for Vince, going for coffee offers a cheaper way to socialize,

It's cheaper for me to meet with my friends and go for a walk and grab a coffee than it is to go for... So, it's really easy and more social to say, 'hey, let's ... grab a coffee, and go for a walk versus'... going for dinner and having drinks, which is going to be ... an extra \$200. (Vince, interview 2)

As such, the social aspect of drinking coffee adds a casual element to the practice. Moreover, both Nadia and Vince stated that throughout the period that the interviews and diary entries were completed, they received coffees as 'gifts' from their friends and family, revealing a last social aspect of coffee practices.

When looking at socializing in the practice of drinking coffee, the importance of using a disposable cup and lid is evident. This is because often, as seen above, drinking coffee is done while being mobile. Here for many participants the cups work as an enabler of the mobility, except for in some cases where the reusable mugs are used. This enabling element of SUPs is further discussed in the next section of this chapter.

5.4. Convenience Enabled by SUPs

While it may seem obvious, the consumption of SUPs provides convenience to the practices in which they are consumed. This convenience is a big enabler of change in practices, and this is best exemplified when looking at our three exemplary practices. Many participants discussed that their use of SUPs is heavily impacted by the convenience they provide to their practices, making it more difficult to reduce their consumption. The results show that this convenience is enabled differently in each practice by varying plastics and situations. This section details how this occurs in each practice, and what it means for assessing environment-friendly change in the practice.

Returning to the use of plastic grocery and plastic produce bags in the practice of grocery shopping, these bags enable an element of convenience because participants do not have to remember to bring these to the store. In the practice of grocery shopping, packaging also aids in convenience, but not in the same way as grocery bags. Rather, there is convenience in buying 'easy' packaged foods, like bagged salads and granola bars, which provide ease in preparation and aid in the mobility of foods. At this point it should be noted that the convenience afforded by packaging is not only related to the practice of grocery shopping, but also to the related practice of food preparation, yet these conveniences are relevant examples, nonetheless. For example, Nina explained her reasoning for buying 'easy' bagged salads,

I usually like to grab a salad kit because it's easy. ... It's easy to just like rip that open, mix it all up, throw some chicken in it, and then that's a nice little meal. You know, even last night [husband]'s like this is a nice little meal like thrown together in 35 seconds... And same with like, if we go to a friend's barbecue, it's just easy to get one of those and assemble it. Then to like, throw together your own salad, and then you. ... Everyone likes those salads; you always know they're gonna be a hit? (Nina, interview 2)

Here it is evident that it is not only about creating ease for herself, but it is also about creating ease for others, which is enabled by the easy packaging of the bagged salad. Therefore, by providing meanings of ease, SUPs change the meanings of the practices of grocery shopping and food preparation. However, given this ease, she mentioned that it is possible to buy salads materials that come in less SUPs, saying that she usually combines the two.

Snack bars are another example of convenience packaging, as participants explained that they choose snack bars for their lunches because they are easy to fit in their backpacks for when they go out for activities such as biking or hiking, and work. Again, the SUP packaging enables this ease in being able to easily take a snack along, strengthening the purpose of SUPs within the practice. Moreover, in the examples above, planning and choosing items packaged in less plastic offer opportunities to consume less SUPs in the practice, however, it is difficult to avoid SUPs completely, as several participants explained that SUP packaging is often unavoidable. This signals that the systems of provisions have an impact on the SUPs consumed in this practice. This will be elaborated on later in Chapter 7.

Turning to the practice of takeout, the throw away nature of the SUPs has enabled the practice of takeout to be what it is today - an easy meal that can be bought and ordered almost anywhere. As mentioned in the previous section, the ability to take off a night from cooking is possible because food can be delivered to the home, however, plastics do not enable this meaning specifically. Rather, plastics enable the possibility that food can be easily delivered to the home, due to their disposable nature. This makes it very difficult to replace SUPs without shifting the whole practice dramatically, as the practice is effectively enabled because the packaging does not need to be returned to the distributor, highlighting the tight connection between plastic materials and meanings of takeout. In this case, it is possible to argue that the disposable nature of takeout materials, including SUPs, has changed the meanings related to ordering takeout due to its importance in the configuration of the practice. Relatedly, as with grocery shopping, the SUPs in takeout enable agents to not plan in preparing lunch, as in the case with Debra, and makes it possible to eat on the go, for example, while on road trips.

Evidently, planning is a way to avoid partaking in the practice of takeout, and relatedly, to avoid plastic consumption. As such, partaking in practices closely related to takeout, such as cooking or eating in a restaurant, offer a way to avoid the practice as a whole. Many participants discussed their takeout habits very closely with their habits of cooking and restaurant eating. For example, Dylan used the summer period when restaurants reopened after the first wave of COVID-19 to discuss how he saw the connections between these practices and SUP consumption,

I feel like there would be a reduction in the amount of single use plastics in that respect [by eating in restaurants instead of ordering takeout]. But that being said, we would have been consuming a lot more in this period of time in the summer. [And] then, that would have then had an effect on the amount of groceries and the single use plastics being used for the groceries as well. (Dylan, interview 1)

Of course, these practices have implications for SUP consumption as well, as Dylan also discussed, “[W]e would have eaten out a lot more, but would [there] have been less use on single use plastics ... because we're not using the takeout containers. In a restaurant, you're using real cutlery and things like that.” (Dylan, interview 1). However, planning might not be enough alone to avoid takeout plastics in some cases. While planning may stop the participation in takeout practices, the

other meanings ascribed (of having a night off cooking, not having to pack a lunch ahead of time, and eating an interesting meal), still pull the practitioner to partake in the practice.

Like takeout, the throwaway nature of SUPs in getting coffee has shaped the practice to be what it is today. Convenience acts as a strong force on the consumption of SUPs in this practice. Even when there are available alternatives such as reusable mugs, they are only sometimes used. The various situations in which the practice is performed would look quite different without the paper cup and plastic lid. Therefore, these two materials enable the possibility to take a coffee easily and conveniently into versatile situations and does not require taking along other materials, such as a reusable mug. This versatility is exemplified by Nate's work environment, which required him to move around in Calgary's downtown core, sometimes meaning he would "make a base at a coffee shop to get [his] work done" (Nate, interview 1), which he then felt it was necessary to buy a coffee which he could take along to various places if needed. Having discussed how SUPs enable convenience in the three exemplary practices, I now move on to how these practices have changed and have been influenced by the COVID-19 pandemic.

5.5. Frequency and the COVID-19 Pandemic

The COVID-19 pandemic has had various impacts on consumption practices because it has largely impacted the frequencies at which these practices are performed. As argued in the conceptual framework chapter, lifestyles, and systems of provision impact practices and when looking at the frequency which practices are performed, very interesting findings arise. Specifically, risk aversion, which can be attributed to lifestyle, and COVID-19 policies, which can be attributed to systems of provision, drive the change in frequency. This impacts the meanings that practices prescribe to daily life and has varying impacts on SUP consumption in the exemplary practices. Additionally, when taking a close look at frequency specifically in the practice of takeout, it becomes evident that, what is named here as COVID fatigue has had a considerably large impact on this practice when compared to the other two practices.

5.5.1. Risk Aversion

Since the beginning of the COVID-19 pandemic, meanings of risk aversion have become more prevalent in the practices of grocery shopping and takeout, but less so in the practice of getting coffee. As such, the following discussion focuses primarily on grocery shopping and takeout. By way of examining changes in frequencies, it became evident how risk aversion has impacted these practices. I start with the practice of grocery shopping, where frequency has changed the most, but not unilaterally in any direction.

Some participants shopped for groceries at different frequencies, sometimes buying more food to reduce the number of trips necessary. This was because, as participants explained, they were trying to reduce their exposure through reducing their trips to the grocery store. Given this, participants Janice and James did not change their frequencies. Specifically, James noted that he did not change his frequency, but did slightly change what he bought, "I [did] change the amount that I buy for perishables and stuff I can freeze. Just in case ... something did happen where I wasn't able to, say I got Coronavirus, I wouldn't be able to leave." (James, interview 1)

The data collected for this research does not indicate that a change in frequency had an impact on the consumption of SUPs in grocery shopping, apart from one example. Vince said that his change in frequency led to using more plastic produce bags, because he did not have enough reusable bags for the larger amount of food that he bought. While personal SUP consumption did not largely change, participants did notice more plastics in grocery stores, such as increased packaging on produce, other individuals using plastic gloves, and plastic coverings on pin pads.

While it was presumed that these plastics were used for the purpose of reducing the risk of virus transmission, participants of this sample did not state that they specifically increased their own SUP consumption for reasons due to risk aversion. For example, none of the participants explained that they wore plastic gloves while shopping or that they purposefully increased their own plastic consumption for the purpose of risk aversion. Nina explained her rationale for this, “Gloves are hands. So, ... we always thought it was kind of funny that people were wearing gloves. Once you touch something, they're already contaminated, just like your hands.” (Nina, interview 1). Regarding the increased use of plastic packaging on produce, many did not see this as being useful and instead just a waste of plastic. Mandy explained that touching produce covered in plastic still enables the ability of the virus to be spread, just as if it was not covered in plastic. Before moving onto takeout, it should be noted that during parts of the COVID-19 pandemic, the use of reusable cloth bags was restricted in many grocery stores, impacting the SUP consumption of grocery shopping. This will be elaborated on in Chapter 7 as it predominately relates to store policy.

In practices of takeout, risk aversion impacted the frequency at which takeout is ordered. In some cases, takeout increased due to the pandemic, while others stated that the frequency stayed the same. Frequency has also changed throughout the pandemic, being lower at the beginning and increasing throughout for one participant. In general, participants attributed the change in frequency to restaurant closures. However, risk aversion is still an element that impacted takeout frequency, in addition to policy. Specifically, for Dylan risk aversion lowered his takeout frequency at the beginning of the pandemic because he and his partner worried about the transmission of COVID-19 from the delivery driver or going to pick up food.

Moreover, the COVID-19 pandemic has impacted how comfortable individuals are in partaking in the practice of restaurant eating and takeout. Debra explained her risk aversion with takeout and restaurant eating throughout the pandemic,

Part of that stems from my age, right? I'm in a category, that's probably high risk. And the fact that I already work in [a] high risk area because I have to go to the hospital. So, I've tried to be cautious on all fronts. So, I haven't gone to restaurants even back then [after the first wave] or now [after the second wave]. (Debra, interview 2)

Though restaurants are seen as safe, they still are perceived as having a higher risk of transmission. William expressed his feelings of eating in a restaurant for the first time in a few months after the second wave passed as being “pretty strange”. He explained that while it was nice to be able to eat out again, there are many things he wondered about regarding the safety of his meal,

[T]here's, you know, the social distancing in the restaurants, which [I] still wonder sometimes if that's enough ... you know, the person who's serving you ... they're waiting on a number of tables ... so they're moving back and forth ... you know, you get the menus, and so on. Now, not all of them are single, single use menus, but [you think] ‘can I touch that? Has the table been cleaned?’ (William, interview 2)

However, when asked if he feels safer using a plastic fork and SUP containers instead of eating in a restaurant, William explained that he trusts the protocols in place, “I accepted that in the restaurants... they've all got their industrial... dishwashers. And that's... I think... that a couple of the... plates have been specially sterilized so ... as far as safety goes, No, I don't see any difference there.” (William, interview 2). This quote is interesting because, given the nerves about eating out, he still would not change his SUP consumption for increased safety.

Likewise, risk aversion not only impacted home delivery takeout, it also impacted getting takeout from the drive thru. Specifically, for Nadia the drive thru offered an opportunity to avoid going inside, where she would have to touch more surfaces. Here, risk aversion changes meanings of the practice, and the frequency at which drive thru ordering is performed, but anecdotally, it probably does not impact the SUP consumption of the practice because it is likely that the same SUPs are consumed through drive thru or ordering in the store. When looking at the practice of takeout, SUP consumption has not changed individually. That is, participants did not describe that they were using more SUPs when they were ordering takeout. Instead, the changing frequencies, due to COVID fatigue, lead to, in some cases, an increase in SUPs. This is discussed in the next subsection.

5.5.2. COVID Fatigue: The Case of Takeout

After breaking down each practice into their elements and comparing the elements of each practice with each other, it became apparent that during the COVID-19 pandemic, meanings of stress related to the pandemic are most evident in the practice of takeout. Participants described that they felt unhappy feelings, stress, low motivation, and poor habits throughout the pandemic, which I have classified and titled as “COVID fatigue”. In many of these cases, COVID fatigue led to, or impacted, the choice of ordering takeout instead of cooking. The examples below all have one thing in common: the stress participants felt due to COVID-19 impacted the meanings that takeout prescribed to them and led to changes in the decisions to order takeout. This in return has an impact on SUP consumption, as the increased frequency of takeout leads to increased SUP consumption, rather than more or less SUPs being consumed in each order of takeout.

First, both Nadia and Vince explained that the pandemic made them feel like they were in “a funk” (Nadia, interview 2), and had “no motivation to cook” (Vince, interview 1). This increased their choice to order takeout, which is often associated with unhealthy foods. Having just finished her degree and adjusting to working a fulltime job during the pandemic, Nadia partially attributed these feelings to her recent life changes, however, she also stated that she ordered more comfort foods to help her feel better. Moreover, Vince attributed his increase in takeout to poor planning, stating it is a combination of things. However, for him, he felt upset because he knows he has the skills and knowledge to cook nutritious meals. Second, Nate found himself also eating unhealthily throughout the pandemic but decided he wanted to change this. This led him to start meal prepping, which in his case led to a reduction in takeout. For him, the unhealthy habits he picked up during the pandemic turned into motivation. Lastly, David talked at length about the increased stress he has been feeling during the pandemic,

[Y]ou have different people with different ideas about whether it's real, whether it's not real. You know, I've had to visit my dad in a senior's home... you're always thinking about, I'm hoping I'm not bringing this into there.... you [try] to be careful in other situations.

But... one of the guys [at] work doesn't want to wear a mask, stuff like that. ... [I]t's all these things start adding up... at church, there's people that are out there, masks hanging down and chin stuff like that [laughs]. ... So, you know, you get all these people that you're dealing with, with these different situations ... and then with the people that are saying, 'Oh, this is a hoax'. And then ... they're not wanting to abide by what ... the government says, and then you're just dealing with all these different people, all these different situations that weren't there before COVID. And then [it] just adds to stress on your... life. (David, interview 2)

This quote perfectly sums up the meaning of COVID fatigue, and for him this stress led to him and his wife wanting to have more relaxed nights which came in the form of ordering takeout. In this case, the takeout is seen as a treat and a way to relax from a stressful day at work. Next, I will discuss a change that is very evident in practices of SUP consumption, wearing face masks.

5.6. Emergence of a New Practice: The Face Mask

Perhaps the biggest impact of the COVID-19 pandemic has been the introduction of face masks into daily life. Face masks were slowly introduced to various corners of daily life throughout 2020 until they officially became mandatory to wear in all indoor public places in Calgary on August 1, 2020 (The City of Calgary, 2020). This legislation included wearing a face mask when in indoor public places such as stores, hospitals, and schools. Masks can be single-use plastic or reusable cloth. Wearing a mask involves a heavy material element because it is necessary to wear a physical cover over the nose, mouth, and chin. However, this new addition to daily life also has had an impact on, and has shaped, practices of SUP consumption.

This section discusses how the act of wearing face masks became situated into practices and its impact on practices. I argue here that wearing face masks has impacted practices but also has become its own practice that is present and a part of many other practices. Four main themes arise in the formation of the practice of wearing masks: adjusting to wearing masks, standards of properly wearing it, meanings of risk aversion, and waste. In general, there is no discernable pattern between the choice of wearing a single-use mask or a cloth mask, and as according to the data, the decision to wear one or the other is impacted by remembering to bring a mask, risk aversion, and wastage. The following subsections discuss these themes and how they have impacted practices of SUP consumption and shows the impact of the COVID-19 pandemic on systems of provision and lifestyles, and relatedly shows the impact of systems of provision and lifestyles on practices.

5.6.1. Adjusting to Wearing Masks

The introduction of face masks accompanied an adjustment to wearing masks as a normal part of daily life. For many participants, the introduction of face masks was not an issue, apart from minor frustrations at the beginning related to physically wearing the masks. This is because some participants found it annoying to wear the masks as it caused skin rashes, made it more difficult to breathe and caused their glasses to fog up.

Given these minor frustrations, wearing a mask quickly became a way to continue doing the things the participants wanted to do, and as such these frustrations are not largely problematic. Specifically, James described that he did not mind wearing masks for these reasons,

[Y]ou're still able to do everything you wanted to do just if you're going inside, you just had to put on a face mask for whatever the business called for... But like I say, you just keep a mask in your pocket or your bag or whatever. [You] always [have] it with you. So, it didn't affect [me] too much. Everything stayed the same. (James, interview 1)

Participants also mentioned their tips and tricks for remember to bring their mask with them throughout their days – having a box of disposable masks in their car, so that if they forget their (fabric) masks, they always have one available. In the case that a fabric mask is forgotten, the circumstance dictates the type of mask worn and the easy substitution between the two shows that both masks have similar utility. This being said, David quickly mentioned the difference in how comfortable SUP masks are compared to cloth masks, and that he can breathe easier through a single-use mask, but also mentioned that he is comfortable wearing both.

The relatively easy adjustment to wearing a mask exemplifies the impact that wearing masks has had on practices of SUP consumption and shows that these practices are not stable to the extent that new elements and materials no longer be introduced. Nevertheless, the introduction of wearing face masks is also governed by social elements such as the standards of wearing a face mask, discussed in the next subsection.

5.6.2. Standards of Properly Wearing a Mask

With the emergence of this practice, comes the competencies of wearing, donning, and doffing the face mask. This research's sample is composed of five individuals who work in a healthcare setting, as is evident in the discussion about properly putting on face masks. As according to participants, properly wearing face masks is about more than just covering your face. For example, Janice felt that, as a healthcare worker, she had an advantage in being comfortable with wearing a mask, which became apparent to her when at a COVID-19 testing clinic, "I remember thinking...oh my gosh, how many times is that person just touch their face and they have their mask on but then ... they touch their face and they've adjusted their mask, like how many times?" (Janice, interview 1). From this quote it is evident that there is knowledge associated with wearing face masks, and that this knowledge is understood to be privileged to some people in the practice and not others. Janice also explained that she is grateful for this knowledge, highlighting the importance of this competency in this practice.

Moreover, the idea of voluntarily wearing a mask is another important aspect of the perception and standards of conduct in the practice of wearing a face mask. When asked about wearing face masks, many participants said that they were willing to wear a face mask, and that they were not anti-maskers. The articulation of this from most participants, and the negative connotations associated with anti-masking, shows that there are social perceptions involved in wearing a face mask, which is an expression of the participant's lifestyle and the 'story' that participants would like to tell about themselves. This is described by Debra one time when she forgot to wear a mask,

I've only done it once. But I walked into the bottle depot, to drop off some bottles. So, you know how you're thinking about a million other things or something, right? And I can't, I've been there before, and I can't figure out why people are looking at me and looking at

me, you know, I walked out and I didn't have a mask on. And I went, why didn't somebody come up to me, right? And say, but I think this is part of it, [it] is [that] people are afraid of you, [they worry] 'what are you going to jump down my throat?' You know, 'are you an anti-masker?' ... and then it was the next day, this poor lady came to me, and I said to her, [at] the grocery store where I was and I said, 'you don't have a mask' on.' [and the lady said] Oh, yes! [Debra laughs]. (Debra, interview 1)

A quote like this perfectly demonstrates the feelings and perceptions that drive individuals to put on a face mask, whether that be a single-use one or a cloth one. This is because they, in some cases, would like to show to the world their 'stance' on the importance of the pandemic. Though not directly related to SUP consumption, what this shows is that a new element of public perception has been added to practices due to the COVID-19 pandemic. In the next subsection I discuss the elements of risk aversion associated with face masks and how this impacts SUP consumption and the practice of wearing a mask.

5.6.3. Risk

There are elements of risk perception and aversion in wearing a face mask. However, this data suggests that these perceptions relate more to the material of the mask than to physically wearing a mask. More specifically, there is a distinction in the risk aversion between the two types of masks. This is partially based on how they fit on the face, one example being how much space there is between the mask and the skin. However, it is more based on protection, as some participants mentioned that the single-use masks seem to be more effective in protection of virus transmission because "evidence suggests that it's safer" (Dylan, interview 1). This shows the difference in meanings that can be attributed to the materials of a practice. For example, for Nadia, her work experience as a COVID-19 tester led her to be more comfortable with the single-use masks explaining,

I've gotten some like pretty nasty stuff near me. And when I take it off, I don't want to put it in my purse or my pocket or whatever. I just want to throw it out. Like, get that away from me. Probably has COVID kind of thing. (Nadia, interview 1)

Given this, she explained that this is not the case in all scenarios, such as when she is at the mall, but to her the disposable masks are the "safest thing to do" (Nadia, interview 1). This is an interesting example of the impact of a SUP material in a practice, because the meanings of the practice hinge on the material which led to a behaviour change in the individual.

The perception of the unequal safety of face masks seems to also have transferred to institutional settings as many healthcare settings do not allow cloth masks and require new single-use face masks to be worn. This was heavily present in the interviews with the healthcare workers, as they could detail this process well. Janice explained,

[A]s soon as you walk in the front door, you need to put on a mask. You wash your hands, put on a mask. So, you're given a mask at the front door because I think even if you take one, they want you to put on one of [their] own. So, even if you, say, had your own home mask, you need to put on one that they've given you. So, you need to put on a disposable one at the door. (Janice, interview 1)

Additionally, for the 'lay' participant, one who does not work in healthcare, there are associated competencies with knowing which masks are allowed to be worn in certain settings. For example, David explained that wearing a single-use or fabric mask "differs from one office to the other"

(David, interview 1). Here it becomes evident that a SUP material can impact larger aspects of individual's lives as it has impacted the operations of a whole healthcare system in addition to new actions that healthcare workers must undergo every day when they enter work. However, risk aversion is not the only factor that impacts the choice in mask material, wastage is also evident an impact and is discussed in the following.

5.6.4. Waste

The new introduction of face masks into western societies, and the choice to wear SUP masks is dependent on elements of lifestyle and systems of provision related to waste. Take the examples of Vince and Nate. Vince's quote below depicts a colourful explanation of his shift to cloth masks, but also shows elements of how his lifestyle and the systems of provision impacted his choice to wear a cloth mask,

I remember getting into the car, and there was more than 10 of [the SUP masks]. They were just littered all over the car, like scrunched up into a ball. They were, the vehicle is not the tidiest because, but yeah, they were shoved in, masks were shoved in the sides of the doors. They were on the floor in the front by your feet. They were in the back. Like just, you know, like, get into the car, take it off. And so, it was like you collecting all these masks to throw away and it was just like, this is a, this is a waste, like this is an enormous waste of money. And it's, it's not great. And you see them on the floor. They're like they become the new cigarette butt. So, I was like, Okay, we've got to stop using these things like, there's absolutely no reason for us to use them. (Vince, interview 1)

Vince's comparison of the face mask to a cigarette butt shows that part of him identifies with environmental concerns of litter and waste, and that he would not like to be a part of the waste problem that has surfaced from the introduction of SUP face masks. In addition to this, elements of systems of provision are also prevalent in this quote as he explained that the single-use aspect of these masks, created by the material modes of provision, has increased clutter in his car in and has added his financial expenses. Vince was not the only participant who stated waste as a reason to wear a cloth mask, Nate explained,

[I]t seems incredibly wasteful to use something once and throw it away ... There's no proof to me that those, those surgical masks are ... any more efficient at reducing your chances of getting the virus to my knowledge. So, I'm happy to use a cloth mask. (Nate, interview 1)

Again, Nate also identifies with the narrative of over consumption and waste of single-use materials, but for him, it is evident that a different element of systems of provision impacted his choice. In this case, it is the systems of information provision and to him, he has not been convinced that single-use masks were any better than others.

One last example of the impact of lifestyles on mask choice. David attributed his mask choice to his family's preference and ability to make items for themselves rather than buying them. In his second interview, David explained that his wife made cloth face masks and that he often chooses to wear these because they were easily available to him. Moreover, he explained that the fact that his wife did this was because she has the skills to sew masks and because his family has a preference of making things themselves and to avoid buying new things if they do not have to. This is an interesting example of the impact of lifestyle, one that is only partially impacted by the impetus to reduce their environmental footprint, but rather it is their conscious choice to make

things for themselves because they can, they like to, and because it reduces their environmental footprint.

5.7. Conclusion

This chapter has introduced and discussed practices of SUP consumption and has created a foundation for the following two results chapters. By breaking the known practices down into their elements and discussing their situational performance, I have exemplified how the situational performances of practices lead to different SUP consumption. Specifically, what is compelling about the settings in which practices are performed is that SUP consumption depends on the reason for performing the practice such as the time of the practice, the mood while performing it, and if socializing while performing. Moreover, when looking specifically at the convenience that SUPs enable within practices, it is interesting to see how SUPs have changed the development of both practices and the daily lives of individuals because they, in some instances, enable mobility and not having to plan ahead. Moreover, the difference in integration of SUPs in each practice, that is if they have alternatives, are avoidable (or not), is striking between the practices and highlights the situational and social dynamics that impact practices.

The introductory discussion on the influence of the COVID-19 pandemic on the frequency practices of SUP consumption adds to the social dynamics of SUP consumption. Specifically, these discussions demonstrate that a number of SUPs consumed predominately changed because of a change in the practice, rather than a changing purpose of the SUP within the practice. Additionally, the introduction of face masks into daily life illustrates how SUP consumption is constantly shifting due to changing policy environments and normative standards of conduct. The following chapter discusses the impact of lifestyles on practices of SUP consumption and how this has changed during the pandemic.

6. Findings 3: Lifestyles and SUP Consumption

6.1. Introduction

Having discussed the situational characteristics of practices, this chapter investigates the relationship between the lifestyles of the participants partaking in this study and their practices of SUP consumption, and how this has shifted with the onset of the COVID-19 pandemic. Correspondingly, this chapter focuses on the left side of the conceptual framework as seen in figure 6.1. In this chapter, the term lifestyles, that is, how individuals choose to express themselves through the practices they partake in, and how they partake in them, is used as a lens through which to view practices of SUP consumption. Specifically, the focus in this chapter is on the impact of lifestyles on practices of SUP consumption, and in some cases, the data shows instances where practices can also shape lifestyles. As such, there are many elements that form the make-up of a lifestyle, and rather than questioning the lifestyles of my participants directly, I utilize the conversations I had with my participants to discover how elements of their lifestyles impact their practices of SUP consumption. The result is that this analysis gives rise to three main themes in which lifestyles impact SUP consumption: meanings expressed in SUP consumption, the impact of household composition on SUP consumption, and the relationship between COVID-19 impacted lifestyles and practices of SUP consumption. Household composition might not be intuitively related to the lifestyle of an individual, but the composition of a participant's household

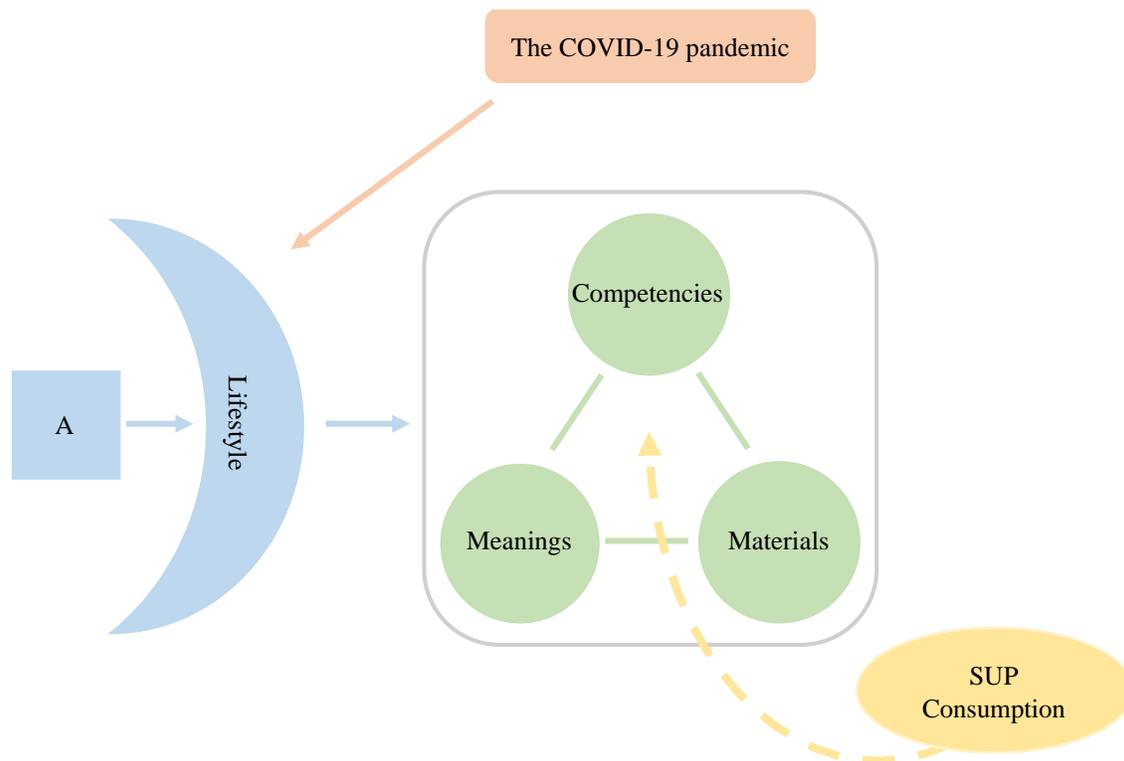


Figure 6.1 Lifestyles and SUP Consumption. This figure is a visual representation of the relationships discussed in this chapter. In this chapter I will mainly discuss the left side of the conceptual model, with special emphasis on the relationship between lifestyle and practices of SUP consumption and how COVID-19 impacted lifestyles influence these practices.

is an expression of their life story, and this story is expressed by the practices in which an individual partakes, and therefore has the opportunity to impact SUP consumption.

In this chapter, the term lifestyle is operationalized by considering the meanings that are expressed when consuming SUPs and household composition as two (of the many) elements that make up the fabric of a participant's lifestyle. That is, the practices that make up an individual's lifestyle, and the story individuals wish to share with the world, are guided by the specific meanings associated with SUP consumption which an actor aligns with as well as their household composition. Of course, there are other elements of this sort that guide lifestyles, but they are not discussed here because they were not largely present in the data. As for the organization of this chapter, section 6.2 of this chapter focuses on the meanings expressed in SUP consumption. Section 6.3 discusses how household composition is an expression of an individual's lifestyle and how it impacts practices of SUP consumption. In section 6.4, the impact of COVID-19 on lifestyles and how these impacted lifestyles shaped practices of SUP consumption are discussed.

6.2. Meanings expressed in SUP Consumption

As is evidenced by analysing the meanings of SUPs in practices of SUP consumption, SUPs have (negative) environmental meanings. More broadly, there are aspects of lifestyles that both 'push' and 'pull' an actor into SUP consumption. In participating in the three exemplary practices, actors embody the environmental meanings of these practices, and this impacts how they consume SUPs. I discuss here two interesting examples of how the participants have done this. It is clear from the data that 1) discussion about participant's efforts to improve their SUP consumption, and 2) dynamics of the reuse of SUPs in practices, show that individuals have externalized the meanings of SUP consumption. The use of alternatives to SUPs is also a way of externalizing environmental meanings but I have decided to omit a separate discussion on this because the use of alternatives was discussed in the previous chapter. Instead, I add elements of this into section 6.2.1 below. The other two themes are discussed respectively in the following subsections.

6.2.1. Efforts to Improve SUP Consumption

Environmental meanings of SUP consumption are evident in participants' actions to improve their SUP consumption. In many cases these actions involved avoiding certain SUPs; however, it is evident that the consumption of some SUPs is easier to curb than others. The reasons for this relate to the characteristics of each practice such as: the ability to avoid plastics used, the alternatives available, and the stability of the practice.

When talking about grocery shopping, many participants mentioned that there are many ways that they can, and cannot, improve their SUP consumption through the things they buy and the materials that they use. Specifically, plastic packaging and stickers are generally viewed as unavoidable by participants and by looking closer at these two materials it is apparent that, though they are unavoidable, each has a different role within the practice of grocery shopping, and the reactions to these materials are an expression of participant's environmental beliefs. With packaging, some participants were aware of their options in choosing packaging that might have less plastics while other participants were less concerned with reducing packaging. For example,

Nate explained his thoughts about reducing his packaging in some shopping situations such as choosing salad ingredients,

You know, you buy ... prepackaged spinach versus just like the [plant]. But it's ... maybe a few more minutes of extra work to ... clean it and ... chop it up a bit. So, choices like that. You're just ... aware of prepackaged fruit that's ... already been cut for you. It's like this isn't really necessary. (Nate, interview 2)

Even when actors do think about which packaging to choose, there are still other barriers in the practice of grocery shopping, such as competencies in which materials are environmentally greener. Nadia explained that she finds it difficult to know which SUP packaging involves less plastic than others. She stated, “Buying in bulk plastic consumption versus like buying individual... little bags, like for example, ...a big bag of chips as opposed to... little bags of chips. You know, I don't know what's better.” (Nadia, interview 2).

In addition to unnecessary packaging, some participants reflected on the necessity of produce stickers, and explained that an alternative should be available by now. One participant, Vince, gave a fruitful description of his feelings when he peels stickers off his produce,

I don't see why they have to put a sticker like that on every single piece of fruit. It just seems really unnecessary. Like it's an apple, like, there should be better ways of determining [which produce it is]. You know, and it's a banana. They're easily identifiable. It's a yellow lemon, and peeling them off is so irritating... I just find them a really unnecessary thing. The whole process of peeling the damn thing off, and then putting it in the garbage and wondering ‘why the hell is this here?’, is just annoying. And unnecessary...unnecessary is probably the main reason why I don't like them. (Vince, interview 1)

There is a key difference in the roles they play within the practice of grocery shopping. Where packaging is easier to avoid by choice, stickers should have “something that could do the same thing” (David, interview 1), thus creating different reactions from participants. These reactions tell us about the agency of the individuals in making the practice of grocery shopping greener. The inability to change a practice, demonstrated by these examples, exemplifies the relationship between lifestyle and social actions, practices and systems of provision, and innovation in practice. In this case, these relationships keep the practice stable and form a structure which actors can draw on. Moreover, it also shows an example of how a practice can influence lifestyle because the actors do not have the ability to reduce their SUP consumption and are therefore restricted by the practice. This impacts their reactions to the SUPs and could potentially impact their intentions as well.

In the previous chapter I discussed at length the implications of using alternative materials in the practice of grocery shopping. Indeed, the use of these alternative grocery and produce bags are an example of how environmental meanings are incorporated into SUP consumption. However, one key material was missing from this dialogue: the compostable bag. To avoid repetition, I will focus the following discussion on the meanings that are expressed through the consumption of the compostable bag.

The introduction of compostable bags for consumption by a local grocery chain was a large topic of discussion among participants in their interviews. Generally, participants view these bags as a great alternative to plastic bags, and I argue here that they are also a great way to show the impact of the environmental meanings of grocery shopping on SUP consumption. The uptake of and, in

some cases, excitement for these bags demonstrate a successful combination of provisioning systems and the lifestyles of participants in the introduction of a new material to the practice. This was partially due to the meanings associated with the practice. Specifically, Nate stated that it was “pretty cool” and “awesome” to see that the Co-op, the local grocery chain, had introduced these bags (Nate, interview 1; Nate, interview 2) and that he “wishes” other grocery stores would do the same (Nate, interview 2). For most participants who discussed these bags, the bags make it possible to reduce their SUP consumption even when forgetting to bring their reusable bags. David stated, “I don't feel so bad... if I'm at Co-op because they have compostable ... bags there.” (David, interview 2). Still, Vince explains his use of these bags is partially based on where he shops, as he mostly shops at the Co-op, but goes to different grocery stores as well. This shows that the consumption of grocery bags in a practice are not only reliant on its elements, but also systems of provision.

As the reader may recall, there are not many reusable alternatives in the practice of takeout. Some participants, but not all, described their efforts to improve their consumption as deliberately choosing restaurants for takeout that have less resource intensive packaging or physically eating at a restaurant. More specifically, participants were aware and noted that these options were good options, but many did not state specifically that their actions followed. For example, James, Dylan, Nate, and William all made note that eating at a restaurant could potentially lead to consuming less plastics, due to there being more consumer-facing reusable materials such as cutlery and cups, though Nate also stated he does not know what happens behind the scenes. Additionally, when discussing his diary entries, Nate explained that he realized that there were several things that he could do to reduce his SUP consumption, such as eating at locations that provide more environment friendly packaging, without going “anti-plastic” like some of his friends,

[C]ertain locations I think ... once you kind of learn locations where ... what their packaging is like... when you buy it for the first time, you don't really know what they're gonna send ... to you ... But once you, you know what you're gonna get, you can start making conscious choices based on Well, I'm gonna support this restaurant because they actually use like, things I can compost or something like that. (Nate, interview 2)

Given these examples, it is obvious that the possibility to reduce SUP consumption is there, and that for some participants environmental meanings are also present in the practice of takeout. However, these meanings might not evolve into action, as is the case with Vince. Throughout his interviews, Vince was quite vocal about his attempts to reduce his SUP consumption, but in this practice, he stated he would not change his choice in restaurant based on the disposability of the materials that his takeout comes in, “If we get takeaway or something, I'm not going to not buy takeaway from that place because they send you things that I can't recycle.” (Vince, interview 2). This questionable change shows that the practice of takeout, though there are environmental meanings, is difficult to change. More broadly, this example shows the mutual relationship between lifestyle and practices. Here other meanings of the practice, for example, potentially ones of ease, are more important meanings than reducing SUP consumption in the practice, and therefore the practice does not allow a change in SUP consumption due to its configuration. The practice of getting coffee follows a similar story.

When it comes to getting coffee, participants attributed their efforts of reducing their SUP consumption to making coffee at home and to using their travel mugs. This being said, in general this was not a large topic of discussion in the interviews or diary entries, and while some

participants attributed negative meanings to SUPs in getting coffee, other participants did not. However, there was one interesting discussion of personal and group environmental intentions that I would like to point out. Janice discussed the lack of options she feels in her ability to reduce her coffee cup usage, especially during the pandemic,

I guess your option is to either not drink coffee or to make it [yourself]. So ... we have done that ... in the office ... And we've ... started to just make it in the in the office instead of going down [to the café] to get all of our coffee, which I think has probably made, you know, pretty good difference, and it's good for, better money wise as well. (Janice, interview 1)

In this case, Janice explained that making coffee in the office was a decision made together with her colleagues. This quote demonstrates how the environmental and financial meanings related to the practice resulted in a change of the office's collective practice of getting coffee, which has resulted in what Janice finds is a relatively big difference in their SUP consumption. In more analytical terms, this indicates a change in the material element of a practice due to the practice's meanings. However, the lack of other changes by other participants indicates that there is likely something holding back the practitioners from reducing SUP consumption. It is possible that the social nature of the practice, the convenience of the practice, or the widespread participation in the practice, have solidified its role in the daily lives of the participants, though no definitive answers can be stated here.

6.2.2. Dynamics of SUP Reuse

This subsection discusses the dynamics of the reuse of SUPs and how this relates to the meanings of SUP consumption. Some SUPs are more likely to be reused than others for various reasons. The three exemplary practices are used here to discuss environmental meanings in practices and how this leads to reuse of some materials, but not others. Through this discussion it is apparent that environmental meanings can influence the reuse of materials and that, in some cases, reuse is not based only on environmental meaning but also on practical matters of ease.

In the practice of grocery shopping several SUPs are reused after their original consumption: grocery bags, occasionally packaging, and produce bags, though only one participant stated that he re-used his produce bags. From these three plastics, participants most often discussed the grocery bag. This includes both plastic bags and compostable bags.

When talking about grocery bags, participants described that they often store bags after its use and then later reuse them for smaller garbage bins, for example the bathroom garbage, and as lunch bags. This is a relatively standard practice among participants, possibly showing that this use of bags is not only done for environmental reasons. Nevertheless, it is evident that reusing plastic grocery bags holds environmental importance to the participants.

When speaking of their use, many participants added that, given their use of plastic bags, they do in fact, try to reduce its environmental impact through its second use. For example, in a discussion about remembering to bring her reusable grocery bags to the store, Mandy added at the end,

But when we do get the bags . . . we don't just throw away the bags, we actually will use them to take out garbage... instead of getting another garbage bag, we use that. So, I kind of tell myself that you know, it's ... okay, the times that you do forget [you] use them for another purpose. (Mandy, interview 1)

This quote exemplifies well the intent and feelings behind the reuse of the plastic grocery bags that Mandy and many other participants feel in regard to their grocery bag reuse.

The more recent introduction of compostable bags has also resulted in the reuse of these bags. The specific reasoning for this is difficult to confirm from this data, but the conversation around their reuse follows a similar logic as the plastic bag. Instead of filling with garbage, however, compostable bags are often filled with materials that are also compostable such as food scraps and cat litter. Nadia described her mother's methods for reuse of the two specific bags, explaining that there are designated uses for each type,

So, with the compostable bags ... when she's making dinner she throws [in there] ... all the stuff that ... can be composted. ... I've noticed that the white ones are designated for a garbage bin. But I know that she uses those green ones as like [a compost bag], because they can be composted. And that way too, she doesn't need to buy more like those biodegradable bags that are specific for the compost bins under our sinks. (Nadia, interview 1)

Nadia's family is not alone in this activity as Dylan described a similar action, "[W]e use them in our composter, [which] was a new change... But otherwise, we just use plastic bags ... and then I reuse them for lunches and different things like that for quite some time." (Dylan, interview 1)

When comparing plastic and compostable bags it seems that the competencies and meanings of reusing a plastic bag have transferred into the reuse of compostable bags, highlighting a change in the material elements of the practice that impacts the reuse of single-use compostable bags. This in return, reduces the need for materials such as other compost bags and changes the practice of grocery shopping to be more environment friendly.

While the reuse of plastic packaging was discussed less often, leading me to believe it also occurs less often, William discusses his family's reuse of their grocery packaging and is a good display of his family's intention to reduce their environmental impact. He explained that he uses,

Plastic bags for things like, you know, bread ... what we'll do is ... we'll use ... those at home for various purposes. ... [W]e'll actually ... wash out some of the plastic bags so that we can reuse them rather than recycling them right away. (William, interview 1)

Moving onto takeout, durable black plastic takeout containers, which are generally provided by some family restaurants, make up the bulk of reuse related to takeout. From this data it seems that takeout containers are reused for both practical reasons and environmental reasons. Both Nadia and Nate described their reasons for reuse as being linked to their durability. For Nadia, it was this in addition to its free and disposable nature, "[I]f I break it ... if something happens at work, then who cares? Just like takeout anyways, I didn't pay for it." (Nadia, interview 1). Moreover, Nate added in an environmental element stating, "[W]e would keep around for a bit until, usually the lids start cracking on them so then you, you get a few uses out of it at least, right?" When asked why he reuses them he added, "Just because it feels wasteful to recycle it right away or like, throw it away?" (Nate, interview 1).

Comparatively to the other practices, the practice of drinking coffee does not involve a lot of material reuse. Instead, the environmental meanings of the practice are expressed through the use of reusable mugs, which has already been discussed previously in this thesis. However, there is one example of SUP reuse in this practice. Debra, who buys coffee and tea on her way to work on

a regular basis, explained that she tries to reuse her cup that she buys at the beginning of the week for several days. She also mentioned that, prior to COVID-19, she would bring her own mug to work but due to the restrictions this has changed and has resulted in her reusing her own cup for several days. Given this, Debra recognized the irrationality of her actions,

I used to bring my own cup from home with tea in it. And then just go get hot water [at work] because that was always just set up and free and you could go get it. Now they cut that out so that you can't bring reusable cups in, your own cups in, [instead] you're forced to buy it [at work]. Which now, ... you're buying this and it's more expensive than if I go to [another café] ... Now, having said that, could I bring my own cup to work? Yes. Why I don't? I don't know ... I link it to 'Well, I can't go get hot water anyway'. Well, I can't go get hot water for this either! [laughs] Is the logic there? No. (Debra, interview 1)

Given all this, one thing that is evident is Debra's intent to embody the environmental meanings in practices of SUP consumption. Her awareness, and desire to be better is expressed in this quote, despite her being restricted by other factors in her life. Moreover, the above quote is an excellent example of the coherency needed in a lifestyle in order for actions to be recognized as legitimate because Debra mentioned that she is "teased" by her family and coworkers because it does not make much sense to reuse a single-use cup when a reusable cup is available. This teasing acts as way for her peers to show her that her actions do not always line up with the environment friendly conduct that is expected. Having discussed some of the meanings expressed in SUP consumption, the following section discusses how household composition impacts practices of SUP consumption.

6.3. The Role of Household Composition in SUP Consumption

This section discusses the relationship between household composition, that is the number, the relationship to, and age of the people participants are currently living with, and SUP consumption. At any phase of an actor's life, the household in which actors reside is an expression of that actor's lifestyle and story. For example, the choice to move out of a childhood home, move in with a partner, or to have children, all show the intentions of actors and how they would like to be seen by others. Additionally, different households and their arrangements provide different opportunities to participate in practices. Moreover, the practices and routines of each household hang together in different ways between households and are dependent on the composition of that household because, for example, people of different ages, will participate in different activities. This then translates to the individuals of each household to have different lifestyles because the practices which compose their daily life vary. In return, the data of this research shows that the composition of the household in which individuals live influences the practices actors partake in, how they are performed, and their SUP consumption. This research shows that household composition, and the role within the household, influences the autonomy and habits of practitioners in consuming SUPs.

In the practice of grocery shopping, household composition impacts an actor's autonomy over their SUP consumption. That is, depending on the position they hold in the household, they have more, or less, power over their SUP consumption because they may or may not be participating in grocery shopping. For example, if an individual is the main shopper in the family, that person has more autonomy over what products, and the SUPs that come along with that, are bought. Both Nadia and Vince discussed this specifically. Vince compared his shopping style to his partner's,

explaining that his partner became the household's primary shopper during the pandemic and that this reduced his autonomy over what was bought. This resulted in what he finds is more waste in their home, "So, he [the partner] buys a lot of stuff that we don't need. Whereas I'm more like, I have a list, I go and get those things because I know that's what we're preparing." He added, "So definitely that has changed. There's a lot more food in the house, a lot more waste. Because of him being the primary shopper, I guess." (Vince, interview 1). Specifically related to her personal SUP consumption Nadia explained, "[W]hen I go grocery shopping, I always try to bring my own reusable bag with that said, my mom doesn't always so I do reuse ... those plastic bags that she gets from superstore." (Nadia, interview 2). Moreover, Nadia and David both see the main shopper as having an advantage in bringing their own bags to the store, and therefore reducing the number of SUP bags consumed. Nadia discussed how, because she has the "luxury" of not being the primary grocery shopper in the house, her habits of bringing reusable bags to the store impacted the plastic that comes home because she is more likely to forget her reusable bags on unplanned trips (Nadia, interview 2). Additionally, David echoed this, saying that he finds that his wife has a better habit of bringing bags,

So, she's gotten into the habit. I think a lot of things are habitual. So, you have to get into your mind that this is how you do it. This is how you do it. But if you only do it once every two or three weeks, it's easy to forget. (David, interview 2)

However, household composition also restricts the main shoppers. Nina, a winter-time stay-at-home mom, explained that her daughter and young children in general, prefer certain types of food which often come wrapped in SUP packaging, saying kids "aren't eating trail mix... they want fruit snacks and granola bars.... and you can't find any that aren't individually packaged." (Nina, interview 1). She added,

[U]nfortunately, it's harder, or even more expensive to do different alternatives. And those are actually things you need to consider a little more seriously than if you're just your own self living on your own, you know? You have to buy more items, you have to go through more items, you have to maybe have disposable things with kids because it's just easier than packing around a cooler full of food (Nina, interview 2).

In the examples above, household composition acts as a restrictive force on Nina's agency in her SUP consumption even though her intention is to be greener. She is partially impacted by other people and other circumstances, making it more difficult to be green. Turning now to the practice of takeout, agency in the practice is not as largely impacted by household composition, instead it impacts the choice to participate in the practice.

One family with a younger child indicated an influence on their takeout efforts, "it wasn't really that [often] that we would actually go out to a restaurant [before the pandemic hit], it seems like, sometimes it's easier with [their son] to just order out. And he's just as happy to do that." (Janice, interview 1). In this case, Janice's family dynamics has led them to do takeout instead of heading to a restaurant. Furthermore, Nadia also explained that her living arrangements, which involve living both at her partner's place and her parent's place, impacts when she finds herself eating takeout. Nadia stated herself that her answers were "very situational", and she added that it is "not necessarily ... purely my decision to go order takeout. It's... the people that I live with". (Nadia 2). While Nadia seemed to think that this reduced the validity of her answers, I find that this reflection is exactly at the crux of the impact of social dynamics on practices of SUP consumption and how household composition impacts practices. It is impossible to look at the actions of

individuals in a vacuum, and household composition is just one of the many elements that make up lifestyles which prescribe meanings, competencies, and materials to practices.

Moving on to the last practice, the data does not indicate an impact of household composition on the practice of getting coffee. This could perhaps be because SUP consumption in this practice largely happens outside the household or because this topic was not directly focused on during data collection. The next section discusses how the COVID-19 pandemic has impacted practices, focusing particularly on the role of lifestyles in the practice(s).

6.4. Lifestyles Expressed in Practices as a Response to COVID-19

With the outbreak of the COVID-19 virus came new policies that affected many aspects of daily life, triggering heightened hygiene and sanitation standards and more awareness regarding the avenues of virus contraction. How these changes were managed is dependent on the lifestyles of actors. This section discusses the impact of COVID-19 on the lifestyles of participants and relatedly, the influence that these impacted lifestyles have on practices of SUP consumption. Specifically, I discuss two themes that come to light when putting lifestyles at the forefront of analysis: the changes in social norms and socializing in the three exemplary practices. Each practice has different standards of proper conduct and socializing occurs differently in each practice. The result is that in some practices new social norms ensued while others stayed relatively the same, and that socializing has changed drastically throughout the pandemic, impacting how the practices are performed and what it means to partake in them. In the following subsections I describe how the pandemic highlighted the certain elements of lifestyles which then created an impact on the practices of SUP consumption and SUP consumption itself. The latter will form most of the discussion.

6.4.1. Normative Conduct

In this sample, the impact of COVID-19 on standards of proper conduct is strongest in the practice of grocery shopping while relatively minimal in the other two practices. As a small disclaimer, discussions on normative conduct were not a specific topic covered in the interviews, rather one that emerged during the data analysis, therefore it cannot be said with certainty that the other two practices of takeout and coffee do not have standards of normative conduct, rather they were not topics of conversation in this research.

Nonetheless, it is apparent that in the practice of grocery shopping participants began to feel additional norms and expectations of conduct during the pandemic, on top of other previous standards. Previous standards followed along lines of ‘good conduct’ such as, according to Mandy, not creating extra work for the cashier by putting fruits and vegetables into produce bags. However, with the onset of the pandemic new standards arose. Participants indicated that there are in some cases, new competencies to grocery shopping. These include, correctly following directional arrows pasted on the floor of the aisles, not touching food and immediately putting it back, proper sanitization, and social distancing. Specifically, for Nate, grocery shopping became increasingly frustrating, and this quote made apparent the normative conduct he associates with grocery shopping during the pandemic,

[P]eople are around you not doing what they're supposed to be doing, so you're like, 'what the hell are you doing?' The old lady who's like walking down the aisle the wrong way. You're just like, it's very frustrating to see all the people, like those rules are supposed to be put in place to help us like navigate this whole thing and everyone's kind of, or a certain segment of people are flaunting it and just not bothering to follow the rules. (Nate, interview 2)

He added, "You see some guy ... picking up a bunch of bananas and then like touching everything and then putting them back and you're like, [what] are you doing? Just like infuriating." (Nate, interview 2). Additionally, Janice maintained that other norms such as social distancing and wearing masks is something that she does when shopping. The expectation of conducting oneself in a proper, COVID safe, manner is present here, and indicates that it dictates how individuals perform their practices.

6.4.2. Socializing

Humans are social creatures and socializing is a way of expressing oneself. Socializing has a large impact on the participation and the dynamics of a practice. As discussed in the previous chapter, socializing is present in varying degrees within each practice. As such, the impact of the COVID-19 pandemic on lifestyles, and the corresponding acceptance and actions of agents, differs depending on an actor's beliefs and intentions and the practices they partake in, but is often impacted by feelings of safety and risk aversion. Moreover, the impact of COVID-19 on aspects of socializing is minimal in grocery shopping and more prevalent in takeout and coffee drinking practices. This could be because one participant indicated that she often shops by herself, while takeout and drinking coffee are often done with others. Correspondingly, the following discussion focuses primarily on changes seen in socializing in practices of takeout and getting coffee due to the pandemic.

The data show that prior to the outbreak of COVID-19, eating at a restaurant was previously a practice that was done with others, and sometimes the participants partook in the practice to socialize. At various times throughout the pandemic, the restaurant element largely dis- and re-appeared due to restaurant closures, and along with this, various elements of socializing also dis- and re-appeared. Therefore, instead of eating in a restaurant, some participants explained that they replaced this with takeout, but the social aspect had not transferred the same. Nate and Nadia talked specifically about how the social aspects have changed for them throughout the pandemic. Nate stated that he often finds himself on zoom calls to socialize and after a long day of work he does not always have time to cook, so instead he orders food and eats while chatting with his friends. In this particular instance, he turned off the camera to eat and when asked how socializing had changed for him, he said, "I mean, obviously, it's different, right? There's no replacement for ... actually, like, being with someone face to face." He added,

And it's really like, tiring, honestly, like, there's definitely been a few weeks ... I'm at work, I'm on zoom calls all day. Then I go home, and I gotta do zoom calls with my friends. And they like, I don't really want to do it sometimes. Right? It's just like, I want to go see my friends. Like, I don't want to sit in front of a computer in my room. Like, be on the computer all day." (Nate, interview 2)

Similarly, Nadia explained a time that she was on a zoom call with friends and got a craving for a particular food, so she ordered takeout, "I'm gonna be honest. I was on FaceTime, on zoom. And

I had a bottle of wine and then I ordered A&W skip the dish.” (Nadia, interview 1). Video calling for the purpose of socializing skyrocketed during the pandemic, and it is possible that a situation like this would not have occurred before the pandemic, thus changing both the dynamics of socializing, and creating a new event to order takeout.

However, according to Nate, the dynamics do not always change. Specifically, Nate described a time at work where socializing stayed the same during the pandemic, but just included takeout instead of eating at a restaurant, “I think the notion is the same, we're leaving our desks or stopping working or breaking bread together, we're deepening working relationships and catching up with your coworkers, right? Essentially, that's the same to me.” (Nate, interview 2). In this case, he added that unfortunately the plastic consumption likely goes up per person. The difference between this example and the examples above is that the practice occurs in person instead of over a video call, which highlights the importance of material settings (such as computers versus meeting rooms) in the practice of takeout as well as the social dynamics in making it feel the same as before the pandemic. These materials and social dynamics, however, do not seem to relate to SUP consumption directly.

In addition to the ways that socializing has changed, some participants also stated that they are less willing to go to eat in a restaurant or to socialize outside of the home as the pandemic progressed. Vince stated in his second interview, which took place near the end of Alberta’s second wave just as businesses began to open up, “... we've almost like just stopped, stopped going out no matter how the restrictions are.” He added, “Now, ... we can kind of gather at restaurants and stuff. But I doubt that we will. It and I think that might be just because ... we're used to it now.” (Vince, interview 2). He also attributed this to his partner’s job in the restaurant business, explaining that his partner thinks it is too soon for people to be gathering again. Additionally, Debra and Nate also explained they were slower and more cautious to go out after the second wave,

I would say, after the first wave, my recollection of how I was at the is that I was more eager to go out. And I think now...I don't need to go to restaurants, I don't need to go, right? ...[I]t's a nice [thing] to have. And it's like, nice to catch up with your friends. But... everyone's still playing, at least the people I hang out with, are still playing it pretty close to the chest and like not really going crazy with it yet. (Nate, interview 2)

The quotes above indicate two things. First, it is evident that the COVID-19 pandemic has brought to light elements of risk aversion in the lifestyles of the participants, and that the participants above have taken this risk aversion and have applied it to their daily practices of restaurant eating and/or takeout. Additionally, both Vince and Nate’s quotes show how they are impacted by the actions of others around them. In both cases their actions and participation in practices are impacted by their family and friends, who also seem to be showing elements of risk aversion in their routines. Second, the dialogue above indicates a process of normalization throughout the pandemic, aided by the ease of ordering takeout and alternatives to ‘normal’ ways of socializing. This could also be attributed to their values and intentions, but it is difficult to know as I did not ask at length about their values of seeing family and friends in person.

The above examples show that the factors which draw actors to participate in certain practices have changed. Yet, these examples do not relate specifically to SUP consumption. There is one particularly interesting example that directly relates to SUP consumption, though not explicitly related to takeout. One participant, Nadia, explained how her family gatherings have changed

during the pandemic and the impact that it has had on SUPs. She stated, “[W]e would ... bring our own meal... or... one person brought meals for everybody.” She explained that they would eat with plastic utensils as an “easy solution” “so that [they] could limit that mode of transmission and not have to ... share ... a giant fork or something.” When asked what it was like to have that change, she added,

Well, it was particularly annoying for my dad, because he I guess is aggressive with his food and the plastic utensils would, without a doubt, break at least twice a meal. So that was annoying and also increases plastic consumption obviously, because he had to keep getting new plastic forks. But in the bigger picture for me, it didn't, if anything, it was like, I know, it was bad. Like, our plastic consumption really did increase, but it was a way that we were comfortably able to see each other. So, it seemed like an, a solution for us to be able to have that like, socialization with each other. I guess in a way it was kind of a relief, like an easy solution that we can do. To give us relief when socializing. (Nadia, interview 2)

In this quote it is apparent that, to Nadia, the intent to safely see family trumped the importance of SUP consumption, because using plastic forks and utensils was seen as a good solution to being able to gather with each other. Additionally, this example shows how intent can change the utility and meanings of the material element of a practice. This in turn, changed the meanings that SUPs prescribe to a practice, because the plastic utensils were no longer consumed solely for the utility they provide in eating but rather they also enabled a gathering to occur in a way that made the participants feel safe. Moreover, this example also demonstrates the relationship between the practice and lifestyle, as the use of SUPs in this family gathering allowed Nadia to see her family safely, therefore upholding these aspects of her lifestyle.

In addition to practices of takeout, elements of safety and risk aversion are also present in drinking or getting coffee. In the previous chapter I discussed how drinking coffee and getting coffee is a very social practice. However, the social aspects of these practices have changed due to the pandemic in several ways, and this has implications for SUP consumption. Due to the restrictions on social gatherings and many businesses closures, going for coffee became one of the only acceptable ways to get outside, as according to participants. Dylan explained, “we go for coffee more, [and] me and my partner usually will go for a walk together. There's not a whole lot of other things to do. We'll go for a coffee and a little drive or something to get out of the house.” (Dylan, interview 1). Additionally, Nadia stated they often go get coffee and go for a drive or a walk with her, or her partner’s family, because it is “acceptable [and] safe” (Nadia, interview 2). For Dylan, ‘doing’ one of the only ‘things to do’ is aligned with his intent to follow the laws and policies put in place during the pandemic and, at the beginning of the pandemic, to “help control” the virus by not going anywhere. Additionally, Nadia’s use of the words ‘acceptable’ and ‘safe’ show that she is attentive to both what other people think of her, and to what she views as an activity that is within the limits of safe COVID-19 conduct. Moreover, both statements are an expression of their beliefs around social norms and safety, and this impacts their participation in the practice, and relatedly their SUP consumption.

Moreover, for some participants getting coffee was previously a way to socialize but was no longer possible during the pandemic. This shows how social meanings in the practice of takeout have changed and, perhaps temporarily, have been ‘minimized’ in the practice. For example, Mandy reduced the number of times she ordered coffee because she could no longer sit in the café to socialize with friends, while Debra, who previously ordered coffee as a pit stop while walking with

friends, now only walks with friends due to the closures. In relation to SUP consumption, it is difficult to know if this change has a direct impact on SUP consumption in the practice because it is unclear which type of cup actors use when socializing in a café in such a setting. For example, Debra explained that she and her friends would often take a paper cup and plastic lid because they would walk to a café and walk back to their starting point afterwards, while Mandy explained that she generally takes a reusable mug when socializing in a café when it was available prior to the pandemic. The changes that occurred in cafes during the pandemic are discussed in greater detail in the next chapter.

6.5. Conclusion

This chapter has focused on the relationship between lifestyles and practices of SUP consumption. Throughout this chapter it was evident that the elements which make up a lifestyle impacts SUP consumption and, in some cases, vice versa. After discussing the meanings expressed in SUP consumption, it seems that, according to the data of this sample, practitioners are better able to act upon environmental meanings where a variety of materials are available. It is also clear, and perhaps expected, that the environmental meanings of SUP consumption are easiest and most successfully expressed in ways that do not involve much movement away from the practice's status quo. This being said, participants still described many situations in which their intentions positively shaped their SUP consumption.

Interestingly, the agency of participants in their SUP consumption practices is particularly noticeable when analyzing the relationship between household composition and practices of SUP consumption. Here it is evident that despite intent, household composition can reduce the autonomy of practitioners in their SUP consumption. Additionally, the discussion surrounding the COVID-19 pandemic in this chapter largely revolved around the judgment that participants may feel from others regarding their actions. What is noticeable throughout this chapter is that environmental intention is often not enough to change practices, options provided by systems of provision are also necessary to provide a platform for change in practices. The following chapter provides an opportunity to dive deeper into these systems and will discuss components of the systems of SUP provision from the consumer perspective.

7. Findings 4: Consumer Perspectives on Systems of SUP Provision

7.1. Introduction

In this chapter I turn to the impact of systems of provision on practices of SUP consumption. In this chapter I employ the right side of the conceptual framework, as illustrated in figure 7.1, in order to focus on how practices of SUP consumption are situated in broader systems of provision and how these systems, and impacts, have changed with the onset of the pandemic. Appropriately, this chapter incorporates examples that demonstrate the influence of broader provisional systems on practices and personal conduct; something that behavioural approaches often miss due to their focus on individual choice. As discussed in Chapter 3 (Methodology), the majority of the primary data for this thesis was collected through participant interviews and diary entries. Therefore, this chapter takes a consumer perspective on the impacts of systems of provision on SUP consumption. This comes at the expense of performing an institutional analysis that rigorously explores systems of SUP provision. Instead, this chapter takes the systems of provision (structures, processes, and agents/agencies) as a point of departure in order to demonstrate how consumers understand the relationship between these systems of provision and practices of SUP consumption. Nonetheless, this proves to be an interesting analysis and results in an understanding of how, from a consumer perspective, systems of provisions impact practices in areas of disposal and COVID-19 policy.

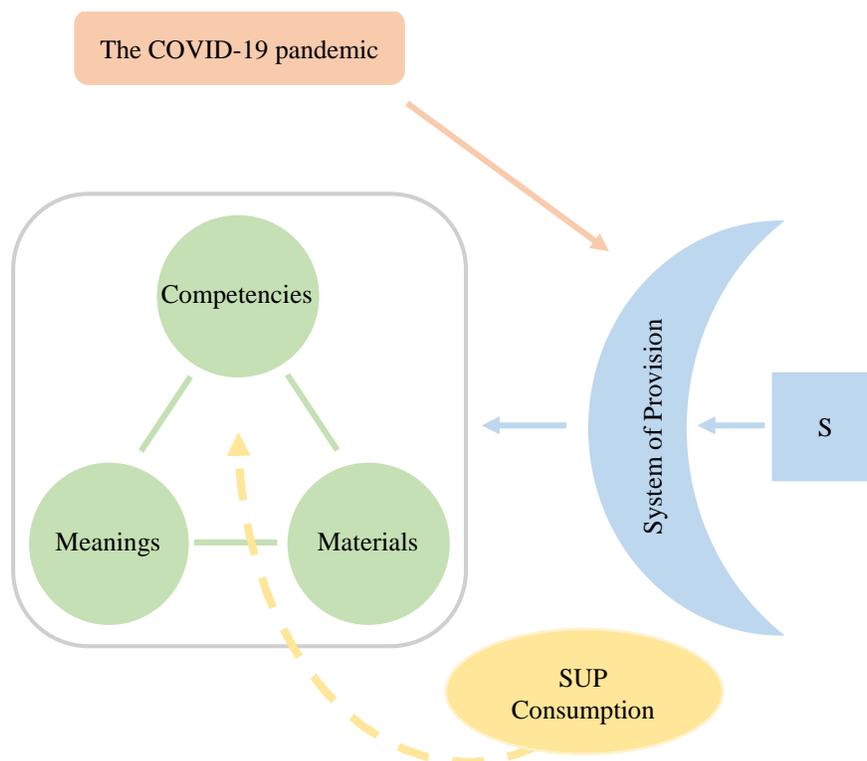


Figure 7.1 Systems of Provision and Practices. This figure is a visual representation of the relationships discussed in this chapter. In this chapter I will mainly discuss the right side of my conceptual model, with special emphasis on the relationship between systems of provision and practices of SUP consumption and how COVID-19 impacted systems of provision influence these practices.

The findings highlight how the presence (or not) of disposal infrastructures can influence SUP disposal, and that the, perhaps unintentional, externalities of the disposal systems impact practices. Moreover, the findings also show that COVID-19 policies have created a foundational impact for change in SUP consumption as they have a ‘behind-the-scenes’ impact on practices. Accordingly, in this chapter I slightly deviate from my previously exclusive focus on the three exemplary practices, opting instead for a focus on the more general impact that disposal infrastructures and policies have on practices of SUP consumption. As such, this chapter is split into two main sections, section 7.2 discussing the disposal of SUPs, and 7.3 focusing on the impact of the many policies implemented throughout the pandemic. This discussion on systems of provision is by no means comprehensive; given the data set and restrictions in resources, I have chosen to omit parts of the provisional systems of SUPs from this chapter such as plastic packaging.

The contextual information shared in Chapter 4 is useful here for any readers who are not familiar with the local context and setting of the city of Calgary because Chapter 4 provides a background on the systems of provision that are discussed in this chapter. Moreover, as introduced in Chapter 2, structures, processes, agent/agencies all impact systems of provision in their own way, and together they shape the dynamics of these systems. I briefly explain how the structures, processes, and agents are related to the institutions discussed in this chapter.

In relation to disposal of SUPs, the municipal government of Calgary, who implements disposal infrastructures in the city, acts as the product of decision-making processes and the structures that create the regulatory frameworks and program standards. The Calgary government and other private businesses are the actors who are responsible for providing various disposal infrastructures in the city. In relation to the COVID-19 policies, the various levels of government implementing these policies act as the structures that create standards, and how these governments come together is exemplified in the policies that are implemented because it impacts how the policies are perceived, and how they influence practices. Moreover, the store policies implemented by private entities shows that these actors share responsibilities related to SUP consumption. Turning now to the following section, I discuss how the disposal systems provided by the municipal government of Calgary and other private businesses have impacted SUP consumption, as described by the participants.

7.2. SUP Disposal

This section dives into the relationship that provisional systems of SUP disposal have with practices of SUP consumption. Disposal is an end of chain mechanism: an action that is completed after or when concluding a practice of SUP consumption. Consequently, SUP consumption practices are situated in the larger infrastructure of disposal systems, and therefore these infrastructures shape SUP consumption, the current environmental impact of practices of SUP consumption, and the possibilities in changing practices in the future.

The disposal of SUPs can be argued to occur within a practice, but it can also be argued to be a practice on its own. This is because the activity has materials, competencies and meanings which come together when an individual disposes of any sort of material. However, in this section I will treat the disposal of SUPs as an activity that is part of practices rather than its own practice, because viewing disposal as its own practice would largely miss its impact on practices of SUP

consumption. Instead, viewing it as an action that occurs within practices of SUP consumption provides analytical affordances because it creates the ability to view disposal as impacted by, and as a part of, the systems of provision and to examine how this impacts SUP consumption.

While disposal is closely related to the practices of SUP consumption, it is often not perceived as directly influencing practices of SUP consumption. This is because most participants did not indicate that the available disposal infrastructures have a direct impact on their SUP consumption. That is, apart from one or two participants, the data does not indicate that disposal influences them to consume a plastic item or to not participate in the practice. However, disposal still has a subtle impact on practices of SUP consumption in several ways. First, participants justified their consumption of plastics due to the fact that they could be recycled. Second, some participants were weary of recycling efficiencies, and this impacted their disposal. Third, there are many competencies related to proper recycling and sometimes there is confusion about what can be recycled. Fourth, just like consumption of SUPs, disposal is riddled with convenience. Each of these topics are discussed respectively in the following subsections.

7.2.1. Recycling as a Justification for SUP Consumption

According to the data of this thesis, the opportunity, or lack of, to recycle SUPs both increases and decreases SUP consumption, but perhaps not in the way that readers might expect. To begin, the opportunity to recycle plastics, in some cases pushes participants to consume more plastics. Some participants stated that they likely consume more SUPs because they know the product can, or may, be recycled. On a broad scale, Nate talked about the impact of recycling systems on his overall SUP consumption. He stated, “I would suspect that probably for me, and for a lot of people to be like, ‘well, I'm using plastic that can be recycled. Therefore, I can use a lot of it because it's being recycled’.” Additionally, he added that the notion of recycling as being good for the planet leads people to continue consuming without guilt,

So, use all the plastic you want to kind of, right? So yeah, I probably do you use more plastic because it's recyclable. If it was plastic, no recycling existed, and we're all throwing it in landfills. Yeah, I'd probably use a lot less plastic, or I'd be way more mindful of it. (Nate, interview 2)

Debra had a similar sentiment when asked if her recycling impacts her SUP use,

I think so, because it's, it's a little bit of a justification. That's not exactly the word, but in some ways it is because you think, ‘Oh, well, like this plastic, but I can put it in the blue bin’, right? So, it's not so bad. ... And so, I don't know if that's true. But I think generally, for people, rather than not using plastics, I think that gives a bit of justification for using plastics, because you can do that. Rather than saying, ‘Oh, geez, [there's] really no way to get rid of plastic.’ (Debra, interview 2)

Likewise, on a smaller scale, David explained using the example of zipper-sealed bags that recycling is not a valid justification to consume SUPs, “... although we do recycle them, but it's still a single use to make it. Just because you're recycling doesn't mean it's not single-use.” (David, interview 2). These quotes show that over time the availability of recycling has possibly led to an increase of SUP consumption. This is ironic because, without going into the specifics of the percentage of the recycled contents present in SUPs, recycling infrastructures are, in some ways, designed to reduce the stress on natural resource extraction. Moreover, it is possible that recycling

has actually led to an increase in this stress, exemplifying a variation of Jevon's paradox, where the potential increase of the efficient use of plastics has led to the increased consumption of SUPs.

It is also possible that a lack of disposal systems can reduce SUP consumption, as discussed by one participant. Debra explained that when on a trip to the Galapagos, she reduced her bottled water consumption and increased her overall awareness on the issue of waste. She explained,

[Y]ou couldn't buy bottled water there. [You] had to have a reusable water bottle, because they have a problem. ... [T]hey've got this mound of plastic now in the middle of this island on one of the Galapagos [islands]. And then you see the ocean ones, where they said there's actually islands of plastic floating out there, a lot of [it] water bottles. And so, it kind of started off with that. And it just seems so silly, but years ago when you may have known that, reusable water bottles [were] just prevalent. So having one to reuse for hiking was not always as convenient as it is now, [because] you can buy them everywhere. So, I think it was a case of industry catching up to what was happening. Now I'm surprised we can still buy bottled water, right? (Debra, interview 2)

Debra's explanation here touches on many aspects of systems of provision and its influences on SUP consumption. The lack of proper disposal on an island led to changes in what was provided on the island, which in turn impacted Debra's practice while she was on the island but also impacted her intentions due to her increased awareness. Hence, in this case the systems of disposal directly impacted her SUP consumption by impacting the materials that were available, but possibly also indirectly impacted her future SUP consumption by changing the meanings Debra associated with SUPs. In addition to all this, Debra turned to the changes that she's seen in the industry herself, as she is "surprised" that it is still possible to buy water bottles. This also shows systems of provision, not only ones related to disposal, are impacted by, but also shape, public opinion, which almost perfectly aligns with Giddens's duality of structure. The inefficiencies of provisioning systems are further discussed in relation to the efficiency of recycling in the next subsection.

7.2.2. Weariness of Recycling Efficiencies

During the interviews, the efficiency of recycling processes was a topic of discussion for Debra, Janice, and Nina. These women questioned the efficiency of broader recycling systems and, specifically, they questioned how much of the plastic that they recycle actually is repurposed and reproduced into a new plastic product. While Debra did not indicate that this could impact her decision to recycle, Janice and Nina did. For example, Janice questioned her effort after hearing that all materials went into the garbage at her work rather than being recycled,

[There is] different stuff I hear from the hospital, right? ... [F]or a long time, we collected ... we put plastic into these... somebody got on the idea that we should recycle this plastic. But then it just kind of came back that nothing really happened with it anyway, it just went to the landfill, just like everything else. So, then it's sort of like, well, kind of like, why? Why do we bother? If it's all gonna end up at the same spot? Why do we put it into three different containers so that it can go into one big bin? You know, I think we ideally, it would be nice, and we like to think that there is something being done purposefully. (Janice, interview 2)

Moreover, for Nina, she explained that depending on her mood this knowledge can impact her to recycle less materials,

From documentaries I've watched and things I've read about plastics ... a lot of it actually isn't recycled. And ever since I've learned that. And maybe it's like a bad thing, but I throw out maybe more than I should. It kind of just depends on my mood. (Nina, interview 2)

These quotes indicate that the efficiency of both global and local recycling systems can impact actor's practices in ways that change their actions. In both cases, the participants began with good intentions, but the information they heard about provisioning systems has tainted these intentions and has altered their behaviour. Relatedly, as mentioned earlier, most participants did not indicate that the disposal of SUPs directly impacted their SUP consumption. In this sense, disposal does not impact the participants' choice to consume SUPs, but it does impact the overall environmental footprint of the practice and how it can be changed to be 'greener'. Moreover, these examples show an impact of systems of provision on meanings of the practice, because it shows that practices might not be as green as originally expected due to their disposal mechanisms.

7.2.3. Competencies and Confusion About Recycling

Recycling SUPs requires knowledge on what is recyclable and what is not. As detailed in Chapter 4, the residential recycling program provided by the municipality of Calgary has specific instructions on what the recycling processing plants can successfully sort. Apart from James, who's residence does not have direct access to this program, participants indicated that there is a lot of knowledge required to properly recycle SUPs. Consequently, in some instances, confusion about recycling can have adverse consequences on their recycling practices. To begin I provide the reader with what the participants describe as the necessary proficiencies to recycle. The diary entries proved to be useful in seeing these competencies in practice as they provided a record of the actions that participants took. It is difficult to generalize which specific materials were recycled because this varied depending on participant and their location. However, as a very broad generalization, plastic bags, and water bottles were often recycled. Coffee cups and packaging were sometimes recycled, and Styrofoam, masks, chip bags, wrappers, produce stickers, dirty plastic, which often involved food, were often not recycled, and instead put in the garbage.

In the practice of getting coffee, recycling the coffee cup, associated lid, stopper, and cardboard holder, seems to require quite a bit of knowledge for Vince. He explained, "they're annoying because, how do you recycle them? Can you recycle them? Are the lids recyclable? Is the bottom recyclable? Like, how ... you dispose of them consciously is always confusing." (Vince, interview 1). Additionally, Nina also mentioned her knowledge on the separation of these materials, "[I]f I have a to go cup, like a Starbucks coffee cup or whatever, I throw it in my blue bin. And I know technically like the cup lid is different." (Nina, interview 1). As a second example, some participants talked about the competencies related to recycling plastic packaging. As a specific illustration, William talked about the differences between materials of produce packaging and how he and his family recycle these differently, "[T]here are two different types of plastic bags that are used, you know, some are just the soft ones which are more recyclable. And then crinkly bags, we hate using the crinkly bags." He added,

[T]hose bags that ... have that resealable part at the top ... from what we've been able to understand [is] if you can cut that off, and throw that in the garbage, then the rest of the bag ... is more recyclable." (William, interview 1)

It is important to note here, that other participants also mentioned their sorting efforts between hard and soft plastics but did not reference their rigour in cutting off certain parts of packaging to

increase recyclability. David also explained how he puts all his plastic bags together into one larger plastic bag before they are put in the recycling, something a few other participants also mentioned, “I save a big plastic bag, one of the bigger ones that come with all [the automotive] parts ... And then I start stuffing all my other plastics in that bag.” (David, interview 1). From this it is evident that, when it comes to recycling SUPs, there are many competencies needed to properly recycle and there is also plenty of room for confusion.

For instance, what constitutes “stretchy” and “hard” plastics? Vince questioned this, “And then you're like, it's a Ziploc bag, stretchy or hard plastic? Like in comparison to a garbage bag or a shopping bag, in comparison to you know, like a bag that you would get from like... an Amazon bag. Like what constitutes stretchy?” Additionally, Vince explained that he sees mistakes in other people’s recycling as well, “Like some of them, you know, the Tim Hortons cups ... that can't be recycled. People think you can put them into the compost or recycle them, you really can't because they're mixed [materials].” (Vince, interview 1). Nina also echoed this, explaining that she has heard mixed messages about the recyclability of coffee cup lids, “You know, you hear mixed things on if those are even recycled or not. I will, and like I said, kind of let them sort it out downstream. I'm sure they get flooded with just garbage basically.” (Nina, interview 2). Like Vince, Nina also questioned the knowledge of her peers, “[A] lot of people don't know what you can recycle and what you can't and what the actual rules are, some don't even rinse out their stuff, because they didn't even know that was a thing.” (Nina, interview 2). What is apparent from these quotes is that the configuration of the recycling system in Calgary impacts the SUPs recycled and the competencies related to recycling. Moreover, despite good intention, confusion about recycling can lead the participants and their peers to incorrectly recycle materials, creating an unintended consequence of this system configuration.

Given all this, awareness-raising and teaching initiatives provided by the municipal government have made an impact on the knowledge of recycling. Specifically, Vince and David said that they sometimes use organisational tools such the online What Goes Where sorting tool, created by the municipality, to check which materials can be recycled or not. Vince explained its merits, “[W]hat an awesome resource because you can literally go and find anything on there, and where it goes. I consult with it at least once a week to see where something goes. (Vince, interview 1). Moreover, David explained that he also learned a lot through his kids and wife after they went on a field trip to the city’s recycling plant with their school. While no participants outright stated that they are opposed to recycling, some explained that they often choose the most convenient option for their disposal, which sometimes leads to SUPs landing in the incorrect waste stream. How convenience impacts disposal is discussed in the next subsection.

7.2.4. Convenience in Disposal

Since the disposal infrastructures available to the residents of Calgary often differs between public and private settings, participants discussed that they dispose of their SUPs differently depending on convenience and the resources available. As such, these factors impact practices of SUP consumption leading to different disposal actions and routines inside and outside the home.

Participants are more likely to recycle when at home because they have their bins organized accordingly and in a matter that is convenient for them. However, it is also based on the time that

participants have and the mood they are in, as outlined by Debra and Vince. Debra illustrated this using her disposal of zipper sealed bags,

I do put most [recycling] when I'm home in the blue bin. ... Now, do I do it 100%? No, because I'm in the kitchen, I'm tidying up and then whatever. I have thrown, [zipper-sealed bags] in the garbage. That's totally being lazy. ... So, a lot of it, to be honest Larissa, comes down to either convenience or laziness at the end of the day. I'll admit I don't think it's a conscious decision. (Debra, interview 2)

Moreover, Vince explained that laziness and time impact him to sort, clean, and recycle accordingly,

[H]onestly, sometimes it's easier to just garbage stuff. ... Like, we got a takeaway last night, and it all came in Styrofoam. And there was [a small] plastic [dipping sauce packet]. And because the Styrofoam is garbage, everything kind of just the Styrofoam ... and then all of that just went into... one clamshell. ... And then it just went in the garbage. And that was just laziness really.

He added how convenience changes in times of entertaining friends or family,

... So, if we were having people over, probably just from a convenience perspective, and laziness, I would just garbage stuff that could otherwise be recycled. If I'm not under the gun to clean or anything like that, and I have time, I'm more inclined to be more mindful of recycling. And also things that I'm unsure of, like, I can look it up if I have the time, but if I'm not sure if something I would, I would rather garbage it, then put it in the recycling and contaminate all the work that I've done to, like, ensure that the stuff that's going into the recycling is stuff that can be recycled. (Vince, interview 2).

Both these examples show that, despite the resources being available, it does not always lead to proper disposal.

Outside the home, disposal is largely a matter of convenience in how far the nearest disposal receptacle rather than taking the time to sort SUP waste. In relation to the practice of getting coffee participants often use the nearest receptacle, whether garbage or recycling, to dispose of their SUPs. Dylan explained this,

When I'm outside of the home, it's 100% convenience. Like, I know some of these coffee cups can be going to the recycling, right? [If] it's there in front of me, I [will recycle] it. If I, it's terrible, it's lazy, but if I got to walk, you know, 15 feet (approximately 5 meters) to do it, I'm not gonna do it. Just whatever's convenient. (Dylan, interview 2)

Moreover, Nina compared her actions to the actions of a friend to discuss her recycling habits,

I know one person ... who would take the lid off of her coffee cup and put it in one and then put the cup in the other. And I don't do that, as bad as that is. I just throw it in the recycling side of it. Because ... I'm lazy, I guess. But I don't throw garbage in the recycling bins. Like when I see it out and about, or at work, you know, we have recycling. And then we have a compost bin and then we have garbage. And I am respectful, and I don't just chuck it willy-nilly in either bin. (Nina, interview 2)

Nina added that she does not notice a lot of recycling bins when she is public parks and outdoor spaces, "Plus, there isn't actually that many. ... I have only really noticed recycling bin and a garbage bin like in a mall and the odd one in a park. But for the most part it's just garbage bins around." (Nina, interview 2). Relatedly, Nadia discussed her disposal of her takeout waste stating that sometimes she throws her waste and SUPs from previous takeout trips in the garbage available at the drive thru,

There's like garbage cans that you can throw out stuff in your car prior to ordering. So often, we'll do like a dump there of like the garbage that is in our car, whether it's just like old takeout bags from before or like coffee cups that we had from previous Tim Hortons or whatever. We'll just chuck it there because it's easy. (Nadia, Interview 2)

This being said, William explained that he also bases his disposal on convenience, but that he does not mind carrying a little bit of waste with him until he is home and able to properly dispose of his waste, "It's easy enough to deal with some of the coffee cups and plastic goods. It's easy enough to bring those home. We can put them into the blue bin." However, he added using the example of takeout from the food court, that he does not carry a lot, "So, you know, we're not taking that home ... we're not taking a bag of dirty things in, you know, when we're walking around in that shopping mall. So, in that case, you know, it might not get recycled." (William, interview 2).

When comparing recycling inside and outside the home, the importance of disposal systems is highlighted. Due to the fact that participants described convenience as being an important element to disposal, the availability of proper disposal bins is important in the environmental impact of practices of SUP consumption. That is, while it should be a compromise between the effort of individuals, it is also necessary to have disposal bins in outdoor settings to encourage proper disposal. This is because, as seen with disposal in the house, participants have the intent to recycle, but are faced with increased barriers outside the home.

Some SUPs are recycled more often than others. Specifically, conversation on this followed the distinction between refundable bottles and other SUPs such as packaging, cutlery, and bags. Debra's quote exemplifies this,

So, I will take them home and put them in the refundables so [that] they don't go in the garbage. Plastics bags ... or whatever, do I haul those home? If I'm out in public? And there's no place? No. So they go in the garbage. ... I must admit I am better with cardboard, I'll walk out and go put it in the recycling stuff, but I don't put the plastic Ziploc in the blue bin which I could. So yeah, it's kind of convenience, and availability. (Debra, interview 2).

Again, there are elements of convenience in Debra's quote, but it is interesting that this convenience differs between materials. However, Debra is not alone in this. Dylan described his habit of throwing his refundable recycling onto the backseat of his car, and the difference between his choice to recycle this type of SUP over other plastics,

You know, if we go, if I go to get takeout, and I eat it, everything goes into garbage, but I [pick out] my plastic bottle, that I have my water in, and throw it in the backseat. [There] was nothing convenient about that, it just creates more work for me. I guess I'm more programmed to believe that [it is] more important to recycle that.

He explained that it is not because of the money that he can collect from those materials,

It's not about the \$13 a year or whatever I get back from it, you know, it's because... I do return them and get money for them. It's not about that [it] is probably the responsible thing to do. I guess ... I'm more programmed to believe that that's more important than say, [a] recyclable coffee cup. Maybe it's been in my life longer, that you could recycle those types of things, as opposed to the plastic covers on coffee cups. (Dylan, interview 2)

Dylan's discussion brings up multiple interesting facts about the impact and presence of certain systems of disposal provision in the daily lives of the participants. As perhaps is possible, the newer introduction of blue bin (non-refundable plastics) could have had an impact on Dylan's practice. However, his inability to pinpoint this to something specific also shows that systems of

provision occur, at times, more in the background of practices and that these impacts are not always obvious or in the discursive consciousness of actors.

7.3. The Influence of COVID-19 Policies on SUP Consumption

The onset of the COVID-19 pandemic caused changes in the systems of provision. While there are many ways that the pandemic impacted systems of provision, the focus of this section is on the COVID-19 policies implemented by governments and businesses throughout the pandemic. Relating this back to the conceptual framework, the COVID-19 pandemic saw the implementation and withdrawal of many new policies in both public and private sectors, effectively shifting systems of provision. Therefore, how these shifts in the systems of provision have shaped practices of SUP consumption, forms the bulk of the findings in this section. The discussion below situates how these practices fit into the larger systems of provision.

As several policies have impacted practices of SUP consumption throughout the pandemic, I discuss below how consumers described these policies' impact on their practices. There are two large sets of policies that form the base of the following pages: government (i.e., municipal, provincial, and federal) and private store policy. The findings show that government policies often indicate an indirect impact on SUP consumption, changing the situations in which practices occur which then impacts consumption, while the store policies have a direct impact on SUP consumption.

7.3.1. Government Policies

In Chapter 4, I discussed the many policies that governments implemented and redacted throughout the pandemic. As a small refresher, these involved lockdown policies in the first and second waves of the pandemic, ranging from restrictions on social gatherings, restaurant, gym, and store closures or reductions in capacities, and reopening policies. These policies have had various effects on SUP consumption practices but often participants did not directly relate changes in their SUP consumption to specific government policies. As such, government policies have had an impact on socializing in practices of SUP consumption. The performance of these practices changed SUP consumption because the closures of cafes and restaurants resulted in different forms of socializing.

As seen in Chapter 6, COVID-19 has impacted the practices of takeout and getting coffee because the mechanisms of socializing have changed throughout the pandemic. This is due to the policies that were put in place by governments. The restrictions on group sizes and indoor and outdoor social gatherings have impacted practices of SUP consumption because they have often forced these practices to include more outdoor activities and also triggered more gatherings to be conducted outside. Moreover, as discussed in the previous chapter, participants felt that walking was one of the only acceptable ways to socialize, but it was also only one of the ways to legally socialize. As with Nadia's example in the previous chapter of her outside family gathering which used plastic cutlery, social gatherings have also moved outside. William had a similar example of how his friend group changed their social gatherings to be outside in a friend's backyard or at a café, rather than inside, due to the rules in place at the time. With this came the increased consumption of SUPs, William explained, "[N]ow ... if we meet in somebody's backyard ...

whoever's hosting will have ... some type of pastry or something. And often ... they'll come individually wrapped ... so that nobody has to touch anything.” (William, interview 1). In these examples, the policies changed the dynamics of how participants socialized and participated in practices of SUP consumption. However, the changes in the use of plastic cutlery and plastic wrap were not directly dictated by the rules that were implemented during the pandemic, rather they were a by-product of increased risk aversion and heightened sanitation.

In Chapter 6 I also discussed how risker aversion is a way to express one’s beliefs and intentions in the practices of takeout and restaurant eating. In addition to this, it is also evident that the closures of cafes and restaurants forms the base of how socializing has changed in the practices of takeout and restaurant eating, which impacts SUP consumption. This is because the closures of restaurants did not only impact the frequency at which these practices could occur, but they also impacted the social dynamics of these practices as it was no longer possible to see certain people. Accordingly, the concepts of ‘cohorts’ and ‘bubbles’ have increased throughout the pandemic and are especially noticeable in these practices, the policies relating to the closures/openings of restaurants, and the social gathering limitations around the openings/closures of these places of business. James verbalized this finding nicely by explaining that he used to see his friends at restaurants, but this was no longer possible due to the restrictions of the closures at times, and when open, the restrictions on eating with friends outside of his personal cohort,

I would go out to the pub, or whatever, to eat out probably maybe once or twice a week with friends or family. So, I mean, you're no longer doing that anymore. You're not seeing them rarely don't really see them, other than a couple people, your cohort. So, I mean, I think a lot less. You're obviously a lot less social, and lonelier and stuff like that. (James, interview 2)

Moreover, some participants explained that their social actions changed within what they viewed as their own bubble. For example, spending time with someone in your own bubble, they would then have less restrictions, such as not wearing face masks as often, as Debra wrote in one of her diary entries, or less plastic wrap in the case of William.

In one last example, Vince described an interesting instance of how the COVID-19 lockdown directly increased his SUP consumption. When asked about if and how his SUP consumption is impacted by others, he described that for his birthday he received liquor that was delivered to his home from friends as gift,

I'm trying to think to times where ... I've been social with people. Which has been really few and far between with COVID, right? So, my consumption 100% would be a lot more thinking about it. If I was still seeing people, you know? Like, in fact, a perfect example of what the question you just asked was, on my birthday, a bunch of my friends ... Ubered liquor to me. So, you know, I got a six pack of beer, and the driver left it on the step ... in a plastic bag. You know, another friend of mine sent me some champagne and came ... in a plastic bag. (Vince, interview 2)

While this example is a unique it still describes one of the many changes that occurred during the pandemic due to lockdown and reopening policies. As is discussed in the following text, store policies also have an impact on SUP consumption.

7.3.2. Store policies and Reusable Materials

Unlike the government policies, the store policies that were implemented during the pandemic directly impacted SUP consumption because they restricted the use of reusable materials. There are two main sets of these store policies. First, many grocery stores implemented policies which did not allow individuals to bring their reusable bags into the store, and second, many cafes no longer filled orders into reusable mugs, instead only using single-use materials. I will discuss these both respectively.

7.3.2.1. *Grocery Store Policies*

Grocery store policies resulted in an increased consumption of SUP grocery and produce bags because participants were restricted in their use of reusable bags at the store. Many participants brought up this change during their interview(s), some explaining their reactions and how they coped with this change dictating their practice. The acceptance of this policy varied among participants, and it is the dynamics and reasoning for this change that I wish to discuss here. Three main findings arise when taking a closer look at the impact this had on the participants. First, the competencies related to grocery shopping changed, second, there is a need for evidence before accepting a policy, and third, the habits of grocery shopping were impacted by the policy. I begin my discussion with the change in competencies of grocery shopping related to this policy.

When bags were prohibited, some participants chose to continue using their reusable bags despite the new rules. These participants were able to find new ways to avoid plastic bags, through learning new competencies in the practice. Relating this to the conceptual framework described in Chapter 2, this change in competencies shows the evolution of the element itself, and how this also changes the materials of the practice. The participants who continued to use their own bags explained that they were informed by grocery store staff that if they wished to use their own bag they, depending on the store they were in, needed to pack the groceries straight into their cart rather than putting the bags on the counter, they needed to pack their groceries at their car, or that they had to pack their own groceries rather than having the attendant pack it for them. William presumed that this was for reasons of safety, as he thought stores did not want their employees touching the bags. The competencies of packing one's own groceries is likely not anything new, but still Janice explained that she had "to become an expert grocery packer" in the time that they were not allowed to use their own bags (Janice, interview 1). In this case, participants likely only learned these new competencies of where and how to pack their groceries once because, after the initial 'teaching' of what actions were acceptable, there were no new actions to learn. I argue then, that while these minimal changes in competencies, it shows small shift in the elements due to a shift in a system of provision.

Given the grocery bag policies, many participants did not accept the policies without consideration. Participants understood this change to be implemented in order to reduce virus transmission by reducing the materials shared between individuals, however some doubted the reasoning behind the policy, explaining they did not see sufficient evidence for the change. For example, Nate explained this but added that at the beginning of the pandemic the transmission of COVID-19 was not understood very well,

I just didn't think that there was any evidence or like any, I mean, I don't have any evidence ... or the stats. But like, it didn't seem likely that bringing in your own reusable canvas bags to carry your groceries home was like, going to be spreading the virus around. But no one knew what was happening at the time. And everyone was just trying to do what they could to be as safe as possible, right? So, we're all kind of like learning on the fly. But looking back now it kind of seems silly. (Nate, interview 1)

David mentioned a similar rationale,

I think at that point, when this was happening, ... they didn't know if it was transferred from surface to hand surface, as much as they thought. ... So, now we know that that's not as big [of] a deal. Even though you sanitize your hands and stuff, it doesn't seem to be a big area of transfer for this virus, compared to breathing in somebody else's air or whatever cough or sneeze. So, I think at the time, we were kind of going by what we were told. (David, interview 2)

The fact that these participants thought about this evidence but decided to change their use regardless, shows how the policy impacted the practice. First, without diverging too much into environmental intention, this indicates that practitioners think before accepting changes in a practice and this deliberation indicates that environmental intentions are engrained in to shopping practices. Second, though they did not always fully understand the reasoning, it shows both impact of intent on practice and the overarching power that policies can have, specifically in a time of crisis.

The habitual nature of grocery shopping was also impacted with the grocery bag policies because some participants, for whom bringing their bags was not habitual, no longer had to remember their bags. Mandy explained why she thought this was bittersweet,

Because 1) I don't have to remember my bags anymore, you know? Well, [you are] telling me I can't reuse it. So, there it is, it's easy, you're gonna give me plastic. But then 2) you're like, 'Okay, that's a lot of plastic.' So, it sucks that you can't bring your own. But then in the back of my head, I'm like, I forget [them] a lot anyway.

However, she also added why she disagreed with these policies,

Because then when they say okay, and you can bring it except you have to wash it regularly. It's sort of implying that, [it is] not really encouraging [you] to reuse your bags, right? Like it's, so you can reuse them, but it's not really encouraging it. Which doesn't make sense to me actually. Because you're going to bring your bag and put your food in and take it to your home, you're not going to leave it in their shelf, or so I don't see how that affects any of the COVID. (Mandy, interview 2)

Moreover, Nadia explained that for her it was one less thing to think about,

With plastic bags, I feel that the grocery stores that I go to now, they still do take them. But I know that the [grocery store] by my house in Edmonton wasn't taking them for a while. So that was another thing that I just like, didn't have to think about, I guess in my efforts to decrease ... I guess [to] be more environmentally friendly. (Nadia, interview 2)

These changes show that the introduction of these policies acted as a way to shift habits in the practice of grocery shopping, and in combination with the conversations I had during the interviews, seemed to create a moment of reflection for the participants regarding their own SUP consumption by bringing it into their discursive consciousness. This highlights both the habitual nature of the practice and SUP consumption and the roles that policies, and other systems of provision, can play in shifting practices.

7.3.2.2. *Café Policies*

Similarly, to grocery stores, café policies also changed practices. However, the café policies did not seem to impact the participants as much as the grocery store policy because participants did not bring their reusable mugs to cafés often prior to the pandemic. However, similar mechanisms are at play here as with the grocery store policy: competencies, evidence, and habits. In comparison with the previous section, I discuss these mechanisms in the following text.

Regarding competencies, it is still possible to avoid, or reduce, the number of SUPs consumed while drinking coffee by slightly changing the competencies of the practice. I go back to an example that I discussed shortly in Chapter 5 to illustrate this point. William explained in his first interview that he and his wife found a café that still allowed him to bring his reusable mug to the café. This case is similar to the ones regarding reusable bags above, because a small change in competencies is needed in finding the café, and then, afterwards the practitioner can continue relatively easily with the rest of their practice. However, not many participants explained that they changed their routines to avoid the impacts of the café policies.

Moreover, it is possible the café policies did not impact participants as much as the grocery store policies because they brought their coffee cups less often, however, participants also seemed to better accept the reasoning behind the introduction of this policy. More specifically, Janice explained that she better understood the possibilities of virus transmission with cups than grocery bags,

Some of the ... policies, I think are over the top and not really relevant. I think, you know, probably the coffee mugs, that does make sense because somebody is handling your ... cup, but that's handled, how many other cups? (Janice, interview 2)

Relatedly, James understood the turnover in a fast-food restaurant to be a higher rate of transmission compared to a small café, and explained that he sees the sense behind this,

[I]t's not my place to say whether they want to implement [the policy] or not. But I mean, if they're trying to reduce outbreaks ... something like McDonald's is a pretty large operation you have, 20 people working at a time, whereas the café, local café has one or two. So, I mean, your ... rate of transmission is probably going to be higher. So, you're probably seeing a lot more customers through McDonald's drive thru too if they all bring in their own cups versus your local [café]. (James, interview 2)

Lastly, similarly to grocery shopping, the elimination of reusable cups in cafes resulted in participants no longer needing to remember to bring their reusable materials. As stated in the previous subsection, it was easier for Nadia because she no longer had to remember her grocery bags, and she explained that this was the case for coffee cups as well,

[Before the pandemic] I definitely, like I was more mindful of [reducing SUPs] and making an effort to use my travel mug versus the single use cups. But now it's not. Since [reusable mugs are] not in use. It's not something that I think about and ... one of the efforts that I used to make ... I can't even make that[.] ... It's not within policy now. So, I just don't even think of it. (Nadia, interview 2)

Moreover, turning back to a previous example once again, Janice explained that it took her some time to realize how many cups she was using and to change that habit,

I think [I] definitely used more coffee cups [at the beginning of the pandemic]. Because it took ... me, it took me a little while, ... like, you know, we were using a lot of coffee cups because they won't let us take our own. And it took us a little while at work before we got the coffeemaker kind of going.

She added that she felt stuck with few options outside of work to reduce her SUP consumption, [A]nd then outside of work. Yeah, I mean, you're just kind of stuck. I think you feel a little bit like, there's no, it's kind of out of your control, which, I mean, I guess it's not out of your control, I could choose not to go and have a coffee. (Janice, interview 1).

In this quote Janice seems to feel conflicted in her SUP consumption, showing the interplay between the habit of getting coffee and reducing SUP consumption as a result of this policy. It is possible that this policy has exaggerated these feelings for Janice because, in other parts of her interviews when discussion was not on the topic of policy, she stated she felt conflicted in her SUP consumption.

7.4. Conclusion

The goal of this chapter was to offer a detailed description of the consumer perspectives on the impact systems of SUP provision on practices of SUP consumption. Analyzing these perspectives showed the relationship between systems of provision and SUP consumption and offered a different outlook which, perhaps, resulted in new findings that otherwise would not have come to light. For example, understanding the impacts of disposal infrastructures on SUP consumption from this perspective highlighted the issues that consumers face in the disposal of their SUPs and the unintended consequences of these infrastructures. Moreover, the consumer perspectives on COVID-19 policies offered a new way to relate COVID-19 policies to SUP consumption and to understand the direct and indirect impacts of this on the social dynamics of socializing and SUP consumption.

This chapter concludes the results section of this thesis. This chapter, and the previous two chapters, discussed the specific situational occurrences of practices, the impact of lifestyles and the systems of provision on practices of SUP consumption. I now move to discuss these results and to situate them into the literature on social practice theory, consumption, (single-use) plastics, and the impact of the COVID-19 pandemic, in the following chapter.

8. Discussion

8.1. Introduction

The central topic of this thesis is to explore the social dynamics of SUP consumption, the practices that consume SUPs, and how the COVID-19 pandemic has shaped these practices. In overcoming the drawbacks of behavioural and structural approaches, this thesis employed a practiced based approach. Moreover, this thesis used the disruption caused by the COVID-19 pandemic as a context to understudy SUP consumption. This revealed the nuances in practices of SUP consumption that otherwise would not be possible to see under circumstances of ‘normality’.

To my knowledge, this research is some of the first practice-based research conducted on the topic of SUP consumption. As such, this study provides a detailed account of three practices of SUP consumption, the changes seen in these practices during the pandemic, and preliminary data on five other practices. The results discussed in the previous three chapters can act as the groundwork for many avenues of future research to draw from because the results indicated that there are many moving elements in practices of SUP consumption - so many that it is difficult to generalize the social dynamics of SUP consumption. Despite this, the use of SUPs within a practice differs depending on, according to this research, the social dynamics of time, socializing, convenience, household composition, policy, disposal, and the material. The three exemplary practices showed three different cases of SUP consumption, and specifically, how the integration of SUPs into a practice can be an indicator for change in a practice. Viewing these practices with an emphasis on lifestyles and systems of provision shows that there are multiple forces that both encourage or discourage SUP consumption through beliefs and intentions, household consumption, and the unintended consequences of disposal infrastructures. Moreover, the COVID-19 pandemic, by way of the implementation of government and store policies, impacted these practices through increasing risk aversion in daily life and altered socializing within the practices. As a result, new meanings became apparent in practices of SUP consumption, specifically the practices of grocery shopping and mask wearing. The new practice of wearing face masks in everyday life provides a case where the dynamics of SUP consumption in practices changed because, in some cases, these masks were single use. The dynamics of mask wearing are related to normative conduct, risk, and wastage, and these dynamics dictate the decision to wear either a cloth or single-use mask.

Having explored and detailed the findings of this research, I now turn to discuss the implications of these findings. This is done by placing them into the larger research landscape on topics of SUP consumption and COVID-19 in section 8.2. I will then reflect on the on-going impacts of the COVID-19 pandemic on this project in section 8.3. Moreover, I discuss the conceptual and methodological implications of this research, in sections 8.4 and 8.5 respectively, by evaluating the conceptual framework and detailing the methodological lessons that I learnt throughout this thesis. Lastly, taking the strengths and limitations of this thesis, I present opportunities and ideas for future research in section 8.6.

8.2. Embedding SUP Consumption in the Literature

In discussing SUP consumption in a broader context, this section turns towards three research papers and one research project. Specifically, two papers that influenced the formation of this thesis, the work of Evans et al. (2020) and Hagberg (2016), cover topics of plastic use from a social practice perspective and use aspects of Shove's elemental model as a theoretical framework. While differing slightly in topics and execution, the similarities allow for discussion between the results of this thesis and the work of these authors. Moreover, I also bring in elements of Rininen et al. (2019) to cover elements of the conceptual framework that are not present in the data, and lastly, I place my work within a broader COVID-19 research landscape by discussing the work of *Everyday Life in a Pandemic: An International Comparative Sociological Study* (n.d.). The results and articles discussed below lend strength to the findings of this research while also tying these findings into larger topics within the social practice theory and disruption literature. The following discussion makes evident the importance of understanding how SUP consumption is embedded in larger social processes. Moreover, each of the following studies apply a slightly different lens through which they study consumption practices; this exemplifies the many avenues that are available in consumption research, but also that these avenues fit and work together to elevate prior understandings of consumption.

8.2.1. Socio-technical Perspectives on SUP Packaging: Enabling, Substitution, and History

This research situates itself as a broad project on plastic consumption research from a practice perspective, and Evans et al. (2020) stands out as a study whose results are comparable to the ones of this thesis. Evans et al. (2020) studied plastic packaging specifically from a socio-technical social practice perspective. Using the values outlined by Shove et al. (2012), the authors discuss three different types of plastic packaging to demonstrate the need for a more socially inclusive narrative of plastic consumption, rather than just a technological one.

The three case studies discussed by Evans et al. (2020) have parallels to the results of this thesis and help to corroborate them. As such, the first case study discussed the notions of food safety related to an “ovenable tray” (p.3) for chicken, that is, an oven-safe plastic bag so that individuals do not need to need to touch raw chicken prior to cooking. Through their analysis, the authors argue that this tray provides a useful, convenient service in food preparation, but that it also changes the meaning of cooking chicken. The results of this thesis show a similar trend. For example, the SUPs in practices of takeout and getting coffee both enable convenience, not planning ahead, and the ability to be mobile. These features have impacted the practice in many ways, and in the examples of grocery shopping and takeout, SUPs have changed the meanings of the practice and have formed it to be what it is today.

Evans et al. (2020)'s second example is the unsuccessful substitution of a plastic chip bag for a compostable one. The authors explain that this was unsuccessful because the material substitution did not satisfy the “social norms and appropriate standards of conduct” associated with practices and materials (p. 5). The bag was not accepted by the public because it made a louder noise than the previous bag. Specifically, this noise was related to negative meanings associated with the food, such as embarrassment to be eating an unhealthy snack. Again, my participants described

that material substitutions do not always provide the same utility as the SUP and therefore these changes are not always accepted, such an example being the reusable produce bag. However, a positive example of a material substitution is the compostable bag. In this case, it does not appear that the norms or standards of conduct in the practice of grocery shopping negatively affected the substitution of the material. These findings also echo the arguments made by Spaargaren (2011, 2013) as he maintains that individuals are not passive in practices, instead that changes in practice are negotiated and accepted by the carriers and that these changes are also dependent on how well these materials fit with other material arrangements and meanings of the practices.

Evans et al. (2020)'s last example follows the historical progression of the use of reusable bottles by cosmetics company "the Body Shop". This third case study revolves around the economic and environmental reasoning for the use of reusable bottles in the early stages of the business's operating days and their shift towards single-use packaging. One of the interpretations that comes from this example is the need to study plastic consumption within its social context, because the use of single-use packaging cannot only be studied from the consumer side. Rather the authors argue it is important to also understand the shifting societal aspects of location, time, self-service shopping, and how these have changed behaviour and practices. This relates to the findings of this thesis. For example, this thesis provides examples of how practices, and relatedly SUP consumption, have transformed as a result of a societal shift relating to the pandemic, and the policies and restrictions implemented throughout it. When viewing SUP consumption from this perspective, it becomes evident that individual consumers can hardly be blamed for choosing single-use packaging. Similarly, interpreting the situational performances of the three exemplary practices of SUP consumption has helped to uncover that SUPs are consumed due to their convenience and their utility, and that the timing and reasoning for the activity impact the consumption of SUPs. This last case study highlights the importance of studying practices overtime; rather than studying a long-term historical context, I uncovered the social dynamics related to practices of SUP consumption, and how these have changed in a relatively short period.

8.2.2. A Historical Perspective on the Shopping bag: Following the material

Relating to historical progression of SUPs, Hagberg (2016) follows the historical changes in what he calls the shopping bag (this is a broader term, but relates to what I call the grocery bag). Hagberg (2016) uses social practice theory, the concept of agencing, and the shopping bag to study how materials are used in different practices. Specifically, in the context of his paper, the author explains agencing as, "a process in which agency is acquired and sustained by the continuous arranging of the elements of practices, accompanied by continuous adjusting of these elements in relation to other elements of the practices in which they are included." (p.112). Moreover, he argues that understanding the historical progression of an object can explain much about its changes, utility, and the agency they bring to practices. His work exemplifies a Swedish case study which analyzes articles published in a Swedish trade magazine, and he uses the work of Shove et al. (2012) to discuss how the material element of the shopping bag fits into different practices. Again, the changes and utility that he finds in research are relatable to the ones that I have found, for the grocery bag but also for other SUPs, and therefore adds depth to my findings. Furthermore, my project also helps to further Hagberg's work by applying his findings to additional SUPs, and not only the shopping bag.

In his discussion, Hagberg (2016) argues that there is a weak link between the shopping bag and the practices in which it is a part, such as the practices of advertising, carrying objects, and use for disposal. This weak link has allowed this material to persist because it can be used in many situations. When looking at the links between the materials, meanings, and competencies, I found that the various single-use materials used in the practice of takeout could potentially lead to an easier substitution of an environment friendly material. However, I also argued that the throw away nature of the materials in the practice of takeout has led to the stability of the practice in relation to SUP consumption. Relating this to Hagberg (2016), this would indicate a tight link between the materials and the practice. Therefore, in opposition to the Hagberg's arguments, the case of the practice of takeout shows that a tight link can *also* lead to the persistence of SUP consumption.

Moreover, Hagberg (2016) also argued that shopping bags led to more impulse purchases because the people no longer needed to plan ahead. Can the same thing be said for the SUPs studied here? Having specifically discussed the grocery bag, a finding was that these bags were more often used during impulse shops because participants did not carry their bags with them during the day. As such, one could infer that this occurs, at least in part, due to the fact that it is possible to take a plastic grocery bag at the store, therefore lining up with Hagberg's arguments. In addition, by expanding this thought to the other practices, specifically getting coffee, I argue that the disposable coffee cup and associated plastic lid could also lead to more impulse purchases because of the versatility and relief they provide from planning to take a reusable mug along, however more research would be necessary to make such a claim.

Lastly, Hagberg (2016) discussed how the physical appearance and shape of the shopping bag has changed over time. This has led the bag to be provided in different shapes and sizes, rather than one perfect bag for all of its uses. This is seen with the multiple types of bags in the practice of grocery shopping. This multiplicity, and the ability of these bags to be used in multiple practices, then leads me to wonder if it leads to increased consumption and could act as a 'lock in' mechanism (Shove, 2003b) for its consumption. Throughout the findings chapters I have argued that the use of reusable alternatives and the reuse of SUPs as a positive element of SUP consumption, and that the throw away nature and convenience add to their use. However, is it possible that these positive arguments also have a negative side? For example, the reuse of takeout containers provided by restaurants or the substitution of the plastic grocery bag for the compostable grocery bag are seen as positive actions that are an expression of the participant's intentions. However, both these materials are repeated versions of the material that is already present (i.e., a container to store food, and a bag to hold groceries). Understanding the dynamics of these materials would require an even closer look at each material than this research could offer.

8.2.3. The Recursive Relationship Between Systems of Provision and Practices

As discussed in the conceptual chapter, both lifestyles and systems of provision have a recursive relationship with practices. That is, practices are embedded in systems of provision, and by participating in practices, practices uphold and shape systems of provision. However, the recursive relationship between systems of provision and practices was not heavily present in the data of this research, and therefore it was not present in the results of Chapter 7. I would like to address this relationship in this section, using the research of Rininen et al. (2019) on the use of fridge-freezers and their relation to food consumption practices. This topic is not directly related to the topic of

SUP consumption, but I draw comparisons between the two to further explore SUP consumption. Due to the fact that these practices are not directly comparable, I add analytic value to the findings of this research with the assistance of a few assumptions.

Rinkinen et al. (2019) discuss “systems of food provisioning and related practices of shopping, cooking and eating” (p.380) in the urban contexts of Hanoi and Bangkok. Namely, they focus on how the use of fridge-freezers, and their connection to the larger chain of ‘cold’ food, has impacted practices of food provision. While the majority of their paper focuses on how the fridge freezer connects local food systems to larger scale food systems and its impact on food practices, the authors also discuss how food practices sustain these systems of provision. More specifically, they explain that the fridge freezer is both necessary to store ready-made meals and to preserve the safety of food that is provisioned from unknown sources, while also enabling long distance food chains. In this sense, the fridge freezer enables these food chains, creating a positive feedback loop for these systems.

A parallel can be drawn here to some of the enabling features of SUP consumption. As discussed, SUPs enable mobility in, and the throw away nature of, practices of takeout and getting coffee. In this sense, while there is likely an increasing push for mobility and convenience by consumers, the SUPs also help to further proliferate these mechanisms, which could have impacts on systems of provision. In this sense, these systems will change what items and materials are provided to consumers.

Likewise, as briefly touched on in Chapter 7, it is possible that the local and global waste disposal infrastructures available for SUPs have increased SUP consumption in practices. Relatedly, the increased use of plastics has also likely influenced and changed the demand for these disposal infrastructures. While on a more abstract level, these changes could induce an increased need for recycling services that have the ability to break down SUPs, or for sorting facilities that can better sort small SUPs such as straws and cutlery. Given the anecdotal discussion here, specific attention ought to be paid to the historical progression of systems of provision, an area of future research which I discuss in section 8.6.

8.2.4. Everyday Life in a Pandemic: A Study

Since its outbreak, there has been an explosion of research on the topics of COVID-19, pandemics, and disruption. A particularly interesting example of emerging research on the disruption caused by the pandemic is the project, “COVID-19 Consumption: Disruptions in everyday life”. This project is the combined work of 27 researchers in 11 countries with 250 participants (*Everyday Life in a Pandemic: An International Comparative Sociological Study*, n.d.). While this study is focused on the social variance seen in the impact of COVID-19, and my project is more focused on the impacts of COVID-19 on SUP consumption, this research on everyday life provides an opportunity to view the findings of this thesis in a larger, more international context. The project focuses specifically on food and mobility but as has become evident throughout this thesis, there are many elements of food and mobility related to the consumption of SUPs.

While it does not seem that the project has reached completion yet, it has released some preliminary findings in the form of blog posts. When reading and comparing each blog post, the

differences between the policies implemented in each country become apparent. As such, this provides the possibility to set Alberta's COVID-19 policies within a larger, more international policy landscape. For example, the milder policies of Oslo, Norway and its impact on daily life (Volden, 2020), can be compared with the stricter policies of France, who, at one point, restricted travel to one hour per day (Devaux, 2020). It seems that the policies discussed in my project fall somewhere in the middle, as daily travel was never restricted, but social gatherings and businesses were.

Nevertheless, the behaviour seen during the pandemic in the western countries studied by the *Everyday Life in a Pandemic* project compare similarly to the behaviour that I have observed in my project, such as changes in food provision. In Paris, it seems that risk became a larger factor in the activities of grocery shopping, which resulted in changes in food provision for some interviewees (Devaux, 2020), while in Washington, some participants described making larger shopping trips and at lower frequencies while others kept their food provisioning the same in both areas (Ellsworth-Krebs & Anantharaman, 2020). These provide similar results to what I discussed in this thesis. Moreover, it seemed that food became more private in the sense that it was prepared at home, rather than in social spheres such as restaurants. The transition from restaurant eating towards takeout and cooking at home in this thesis, parallels this finding in Paris as well. Lastly, the Paris study also presented methods through which participants circumvented lockdown policies in order to keep social links intact. However, participants assured they implemented safe sanitary precautions while doing this. Participants of my study also changed how they socialized, and in some cases increased their SUP consumption for the same reason as the French: to be COVID-19 safe when socializing.

These similar changes in behaviours lend strength to the findings of this research because it shows that the behaviours seen in the results of this thesis were not done in isolation or were an anomaly. However, the *Everyday Life in a Pandemic* project did not focus on SUP consumption specifically, leaving this aspect of the thesis a more specific addition to the scientific literature.

8.3. The Continual Impacts and Changes of the Pandemic

During the pandemic, the world has changed and continues to change, at a very fast pace. As such, this pandemic has brought many changes to daily life and continues to do so. Along with these changes, research on COVID-19 has increased drastically since the beginning of this thesis. Given this, and without conducting a new literature review, this research provides new data that is relevant. With this thesis, I chose to focus on a qualitative description of the social dynamics of SUP consumption. As such, this research provides detail on the reasoning for increases or decreases of SUP consumption by looking at the configuration of the practices in which this occurs. These dynamics are interesting even after the pandemic ends because it accounts for how life changed during this time and can provide detail for future changes. This being said, there are still elements of this thesis that I would alter given the unfolding of the pandemic during the research process.

As the pandemic has gone on, I would not change the content of what I wished to study, rather I would slightly reword my research questions to better reflect the continuously changing nature of the pandemic. Keeping this in mind, my main research question, "How do social dynamics shape

use of SUPs in everyday consumption practices and what impact has the COVID-19 pandemic had on these practices?”, provides the proper space to incorporate the changing nature of the pandemic. However, it does imply that the pandemic has a final impact on consumption practices, rather than a constantly shifting impact. Instead of rewording the main research question, I would slightly reword my first two sub-research questions. As will be discussed in section 8.5.1, I integrated the ongoing nature of the pandemic into the methodology of this study, but this could be better incorporated into the research questions. As such, I think the way that the first sub-research question is currently written, “Which daily practices use SUPs and how is SUP consumption integrated into these practices?”, should better include the fact that this research was conducted well into the pandemic. Therefore, I would rephrase this as “In the COVID-19 pandemic, which daily practices use and consume SUPs and how are SUPs integrated into these practices?” This better shows that the practices discussed in Chapter 5-7 are described as how they occurred during the pandemic, which could be the same or could have seen changes, despite not directly focusing on the changes seen due to the pandemic.

Then moving to the second research question, “How have these daily practices, and SUP consumption, changed as a result of the COVID-19 pandemic?”, to me, could imply that the changes seen due to the pandemic are final. However, the changes in practices that are a result of the pandemic are constantly shifting and being shaped. As such, the second sub-research question would be reworded to “How has the COVID-19 pandemic shaped these daily practices and SUP consumption?” The third research question focuses on socio-cultural context in which SUP consumption takes place, and does not include an element of the pandemic, and therefore I would not change this question. Next, I move to reflect on the conceptual framework.

8.4. Reflecting on the Conceptual Framework

For this thesis, I combined the theoretical frameworks of Shove et al. (2012)’s elemental model and Spaargaren & van Vliet (2000)’s lifestyles and systems of provision model. Perhaps taking the road less travelled by using this approach, I believe that this combination was a fruitful one, and its application to studying SUP consumption highlights areas for theoretical advancements in social practice theory. First, I will discuss the positive elements of this conceptual framework, and then I will move to the difficulties I had in applying it.

The focus on SUPs consumed in a practice automatically turns attention to the material element of the practice. Keeping SUPs central in analysis also highlights how the other elements (the competencies and meanings), lifestyles, and systems of provision relate to, and influence, the material element of SUPs. Both the work of Evans et al. (2020) and Hagberg (2016) focused on the material(s) of plastic, and this is beneficial when studying material consumption rather than a service such as energy or water usage. Moreover, the combination of these two models brought my eye towards studying the relationship between lifestyles and systems of provision, with a special focus on their connections to the practice’s elements. This showed new connections in the relationship between the two sides of Spaargaren’s model and the *specific* elements of a practice. I illustrate this with two examples. First, the lifestyle element of beliefs and intentions has impacted the use of SUPs because, in some cases, positive environmental intentions led to a decrease in SUP consumption. This demonstrates that beliefs and intentions of individuals can influence the material element of a practice. Second, relating to systems of provision, the COVID-19 policies

implemented by private businesses throughout the pandemic demonstrate that shifts in systems of provision can change both the material element of practices (i.e., the consumption of SUPs) and the competencies related to the practice. Here I refer to the new competencies that participants needed to learn relating to their SUP use during the time that grocery stores and cafes were not allowing reusable grocery bags and coffee mugs. Lastly, this approach uncovered these relationships, added detail to these relationships, and made Shove's model less reductive.

However, focusing on the elements within a practice is not without challenges. Keeping focus on the SUP consumption within practices, and not only the practice as a whole, is difficult. This is because this takes attention away from other dynamics of the practice, which could possibly provide detail on how the practice is organized and how it shifts. In this sense, focusing on SUP consumption, and therefore more heavily on the material element of practices, is reductive.

Applying Spaargaren's model for studying social practices was also challenging at times. While this model creates a way to distinctly turn attention to social contexts of practices, it was difficult to operationalize for three reasons. First, the definition put forth by Giddens (1991), which defines lifestyles as, "[a] more or less integrated set of practices which an individual embraces, not only because such practices fulfill utilitarian needs, but because they give material form to a particular narrative of self-identity" (p. 81), does not further define the factors that constitute a lifestyle. This makes it difficult to use the concept of 'lifestyle' as a perspective to understand practices as well as to study the relationship that lifestyle(s) have with practices. Second, despite studying multiple practices, I analysed each separately, and therefore, studying the "more or less integrated *set* of practices which an individual embraces" was hindered because I did not focus heavily on the connectivity between practices. Perhaps this could have uncovered more detail regarding the lifestyles of the participants of my study. Third, the operationalization of 'lifestyles' into a discussion of the meanings that are expressed in SUP consumption, I believe, is a relevant way to demonstrate how individuals express their "particular narrative of self-identity". However, this creates a slippery slope towards a social-psychological analysis of SUP consumption; a form of analysis that social practice theory works hard to separate from. As such, a stronger operationalization of lifestyles could be further beneficial.

Lastly, I discuss the more general use of social practice theory in exploring SUP consumption and its position in everyday discourse. As argued by some, social-psychological theories are dominant in policy discourse on environmental issues (Shove, 2010; Spaargaren, 2011). This has transferred to how individuals understand their role in reducing human environmental impacts, and often conversation on topics related to this reverts to either the importance of individual choices, or the need for large structural shifts by corporations and society. I found this discourse very apparent in the conversations I had with my participants. That is, when discussing participants' SUP consumption, they often referred to the impact of their own behaviour and choices, or the responsibilities of corporations in reducing SUP consumption. This highlights the difficulty in not only shifting policy discourse beyond the social-psychological, as is advised by Shove (2010) and Spaargaren (2011), but also the challenges of shifting how the roles of individuals, corporations, and practices in applying environmental solutions are understood. As a new researcher to social practice theory, I have noticed the difficulty of shifting this thinking within myself. Nevertheless, applying a social practice lens to study SUP consumption is advantageous and I argue, along with many other social practice theorists, that it has much potential moving forward.

8.5. Reflecting on the Methodology

In this section of this chapter, I reflect on the methodology, research methods, and challenges that arose during the data collection phase of this project. Throughout the project, there were elements of the research that required extra consideration and I wish to discuss them here. These elements are: applying a methodology that would fit with the changes of the COVID-19 pandemic, my personal positionality in the research, and the validities related to this project. I begin with discussing the timing and implementation of methods within the COVID-19 pandemic.

8.5.1. The COVID-19 Pandemic, Timing, and Implementation of the Methods

The evolving nature of the COVID-19 pandemic created considerations in the formation, timing, and implementation of the methods in this study. These considerations involved creating a methodology that could accurately incorporate the fluctuating conditions that the pandemic created. This stemmed from the idea that I did not want the thesis to provide a snapshot of the impact of COVID-19, but rather how impact of COVID-19 on SUP consumption has changed and continues to change.

The period of time during which the interviews and diary entries were conducted impacted the results of this study for two main reasons. First, the period of the pandemic in which the data is collected impacts consumption. The interviews and diaries were conducted at the tail end of the second wave of COVID-19 cases in Alberta. As such, the activities noted in the diary entries reflect the policies of the pandemic for that time. For example, during the height of the second wave, there were no social gatherings allowed at all, and this likely impacted the SUP consumption of the participants. These considerations were kept in mind when building the interview guides and diary entries. Second, the time of year impacts consumption. This is best illustrated by the completion of the diary entries because the diaries provide a snapshot of consumption for one week in February. This is shortly after Christmas, a time of the year when it is possible to assume that purchasing is generally lower than the months prior. Additionally, it being winter, the participant's activities are likely much different from what they would be in the summer, leading to the possibility of different SUP consumption.

8.5.2. Positionality and Reflexivity

Throughout the research process I was careful to reflect on my positionality within the research as well as with my participants. This resulted in two considerations. First, specifically for the interviews, I aimed to create a relaxed setting for the interviewees by taking a conversational tone to the interview and I was careful not to direct the conversation with my own opinions and thoughts. To create a setting in which the interviewee could lead the conversation, I created broad questions. However, in hindsight, these questions may have been too broad, making it difficult to generalize my findings during analysis.

Second, by reflecting on the positionality of this project it became apparent that introducing my project and its goals to the participants may have biased the resulting data. Specifically, on the participant information sheet provided to potential participants, the project was introduced with a neutral tone; as a project that studied the impacts of the COVID-19 pandemic on SUP consumption

in everyday life. On this sheet, I also provided the aim of the project, stated as, “to help improve the sustainable consumption of single-use plastics” (See Appendix 3 for the full information sheet). While it is difficult to think back on how I introduced the project in the interviews with my participants (this was not reflected in the audio recordings or transcripts), I aimed to reiterate scope of this project in a tone that was as neutral as possible. Moreover, in the interviews I explained to the participants that, despite the assumptions they might have about this project (for example, that the project comes with the aim of reducing SUP consumption), I was interested in hearing all opinions, actions, and thoughts, whether they could be pinned as ‘good’ or ‘bad’ environmental actions. I explained that, as a researcher, I preferred to have truthful information rather than the behaviours participants wished they exemplified. Even with this disclaimer, it is possible that the explanation and assumptions related to the purpose of this study may have encouraged or pressured participants to answer in an environment-friendly way or to lead the conversation in a ‘greener’ direction. It is possible that, in reality, there may be a difference in how green the participant’s practices are stated to be and how green they actually are. This shows that no research instrument can be perfect, leading me to my next discussion on research validities.

8.5.3. Validities

To ensure the rigour of this research and its methods, the validity and reliability were evaluated during the research process. Three types of validities and reliabilities, and how they relate to this project, are described below.

First, measurement validity. To ensure that the research instruments measured what they are intended to measure, I broke down my conceptual framework and research questions into smaller elements, discovering the key factors that I wanted to measure. These key factors are: SUP consumption, spatial and temporal alignment of practices, how plastics are integrated into practices, the impact of the pandemic, and how elements changed, and the impact of policies and socio-cultural contexts on practices. I then used these elements to shape my interview questions and the design of my diary entries. I supplemented this with the work of Castelo et al. (2021), who discuss a conceptual framework to study practices, to add rigour to my process. While it is difficult to truly know how the interview questions are interpreted by participants, probing into specifics of their responses helped to uncover underlying assumptions and improve the validity of the instruments.

Next, reliability. To ensure external reliability, which measures if research instruments return the same results when used in different circumstances, I piloted the research instruments as discussed in Chapter 3. Additionally, elements of triangulation in the data enhanced internal reliability, which evaluates how well different instruments to measure the same ‘item’. Triangulation occurred through the combined use of the diary entries, interviews, and contextual information. Moreover, the diary entries and interviews at times measured the same phenomena in different ways by the use of overlapping questions.

Lastly, external validity. The sample size is quite small, making it very difficult to generalize the conclusions to broader populations. Additionally, the COVID-19 pandemic constantly shifts contexts and environments, making it difficult to compare one local context to another if done in

a different time frame. However, doing a similar study in a different area with different policies, and culture could lend strength to the claims made in this research.

8.6. Potential Avenues for Future Research

This study has created a foundation for understanding SUP consumption from the social practice lens. However, as discussed throughout this chapter there are limitations to this research and areas of study that this thesis could not reach. Therefore, I would now like to discuss potential avenues for future research.

Part of the configuration of practices is understanding the social and provisional contexts in which they take place. In the case of this thesis, all participants resided in Calgary, Alberta (except for one pilot participant who resided outside of Calgary and whose data was not used). This research detailed the local context of the area by providing information on the systems of SUP provision and their relationship to SUP consumption. However, contexts differ depending on location, time, and culture, and therefore it would be beneficial to conduct a similarly study in a different local context to add strength and generalizability to the findings of this thesis.

A comparative study between the urban contexts of Utrecht in the Netherlands and Calgary was originally planned for this thesis but was unfortunately not possible due to extenuating circumstances. An international approach to studying practices of consumption can help to further understand aspects of, and impacts on, sustainable consumption in different countries. This, in return, can better educate sustainable consumption from a global perspective, as called for by Spaargaren (2011). While a comparison of these two local contexts does not go outside the western perspective that Spaargaren (2011) argues is important to overcome, such a comparison would be insightful, nonetheless.

A comparative study would require studying different systems of (COVID-19-) provision, which leads me to my next suggested area of research. A dynamic analysis of the systems of SUP provision within Calgary can further the findings of this thesis. As such, conducting an “institutional analysis” (Spaargaren & van Vliet, 2000, p. 54) by contacting business owners, and studying the history of SUPs and how this has shaped their consumption, could shift focus towards producers to help balance out the heavy consumer focus that is present throughout this thesis. Moreover, taking the social dynamics that I have discussed throughout my three results chapters, and situating them better into a long-term historical context, such as the work of Hagberg (2016), would further understanding on contexts of change in practices of SUP consumption.

Lastly, perhaps the biggest contribution of this thesis is that it highlighted nine practices of SUP consumption. Therefore, it provides nine avenues for future research on sustainable SUP consumption. The exploratory nature of this research uncovered these practices, but there is much more to learn. Focusing specifically on each of these practices can provide an opportunity to understand these practices, their historical evolution, and how each specific practice has been shaped to be what it is today. From there it is possible to better understand the relationships that these practices have to each other (Nicolini, 2012), and how this can be used for positive environmental change.

9. Conclusion

Having travelled through the chapters of this thesis, I now come to the final conclusion. The central objective of this thesis is to contribute to the sustainability of SUP consumption by advancing understandings of the social dynamics that shape the use of SUPs in everyday consumption practices during the COVID-19 pandemic.

The conceptual framework, methodology and analysis were instrumental in the progression of this thesis. For the conceptual framework, I dove into social practice theory, combining Shove et al. (2012)'s elemental model of social practices and Spaargaren & van Vliet (2000)'s model for studying social practices. The combination of these two concepts then provided an organizational foundation for the three results chapters and using these two theories together provided new avenues to discuss the data and findings of this research in a dynamic manner. I also used work from various authors to underpin discussions on change in practices. Moreover, the 24 qualitative interviews, 11 sets of 7 diary entries, and internet-based background research provide the empirical data collected in this thesis. This qualitative data was then analyzed through an inductive and thematic analysis scheme and the results described and discussed. The combined contribution of each of the participants, theoretical concepts, previous research, and this thesis' chapters leads to my ability to answer the main research question guiding this thesis:

“How do social dynamics shape the use of SUPs in everyday consumption practices and what impact has the COVID-19 pandemic had on these practices?”

To begin answering this question it is important to know which practices consume SUPs. This research found nine connected consumption practices that use SUPs: food preparation and storage, mobility, instore, online, and grocery shopping, practices relating to work activities, ordering takeout, getting coffee and in the case of COVID-19, the practice of wearing face masks. As such, there is a great variety of social dynamics that shape SUP consumption practices. While I chose to focus specifically on the practices of grocery shopping, takeout, and getting coffee, the social dynamics in these three practices is also varied. When looking from a broader perspective, it is evident the social dynamics create a gentle ‘push and pull’ for the consumption of SUPs. It is difficult to generalize the influence that social dynamics have on these practices because each practice and social dynamic is different. Nevertheless, this research found the following social dynamics that shape SUP consumption: timing and reasoning for the practice, the convenience of using SUPs, the disposal of SUPs, the meanings relating to the substitution and reuse of SUPs, the impact of policy, socializing, and risk aversion. I explain how these social dynamics shape practices in the next few paragraphs.

As seen with the exemplary practices of takeout and grocery shopping, the integration of SUPs in a practice varies. For example, the practice of takeout has been shaped to be what it is today due to the throwaway nature of the materials of the practice, but grocery shopping allows for more substitution of SUPs in the practice through the various bags available to carry groceries. As central to the first sub-research question, these examples demonstrate that studying the integration of SUPs in various practices has the ability to reveal the social dynamics at play. Specifically, the use of SUPs within practices is partially dependent on the social dynamics of time and reasoning for participating in the practice. That is, the reasons for participation can include the necessity of

accomplishing the practice, such as grocery shopping, opportunities for socializing with friends and family, and mood, to name a few. The data found that each of these dynamics do not impact SUP consumption in a unilateral direction but can lead to a reduction or increase in SUP consumption. Therefore, the sustainability of SUP consumption is then dependant on these dynamics because they vary with each situational context in which the practice is performed.

The results also found that SUPs are enablers of convenience within practices because they enable a practitioner to overcome the need to plan to use certain materials, and because they provide the opportunity for mobility within practices. This is evident in the three exemplary practices. In regard to planning, SUPs, and other related single-use materials, allow individuals to participate in grocery shopping without having to remember a grocery bag or coffee cup, and takeout can be brought easily to many locations. Moreover, mobility is present in the practices of takeout and getting coffee because the SUPs in these practices enable the ability to easily take food and drink to multiple locations. The previous chapter expanded on this finding to argue that the absence of the need to plan ahead can create a pull towards SUP consumption because this can allow for more impulsive shopping (Hagberg, 2016).

SUP disposal systems can also enable consumption within practices because recycling systems provide the opportunity to use plastic with less guilt. In a broader sense, this research found that there are several unintended consequences of the disposal systems, some of which could have adverse impacts on the environmental impact of SUP use, but do not necessarily impact the practice in which the disposal is a part of. That is, while the disposal of SUPs is a social dynamic that has impacted practices of SUP consumption, SUP disposal does not impact SUP consumption directly.

Conversely, the materials available to an individual participating in a practice, that is the SUPs and their alternatives, substitutions, or their ability to be reused, can act as a way to reduce SUP consumption. But, when comparing to Hagberg (2016), it became evident that the weak or strong links of the material element to the other elements can lead to SUP consumption being more difficult to reduce. Moreover, for the successful substitution of a SUP for another material, the new material must align with the original material configurations (Spaargaren, 2011, 2013) and norms of the practice (Evans et al., 2020). When available, individuals can, and sometimes do, use their personal agency to reduce SUP consumption. This comes as an expression of the meanings related to SUP consumption. But the materials must be made available by the systems of provision.

To answer the second half of the question and relating to the second and third sub-research questions, the COVID-19 pandemic saw a change in the provision of several SUPs due to the policies that were implemented to curb the spread of the virus. These policies, implemented by private businesses, specifically grocery stores and cafes, changed *how* SUPs are consumed in practices. This occurred because they no longer permitted personal grocery bags to be used by patrons, or the use of reusable mugs in cafes. This led to new competencies in the practices of grocery shopping and getting coffee, negotiation in acceptance of the change in the practices, and a change in habit for some. Conversely, the policies implemented by the government bodies, mostly the provincial government of Alberta in this case, led to indirect changes in practices. Specifically, the policies led to the changes in the practices by way of changing how socializing occurred.

Socializing within a practice is a social dynamic that shapes practices of SUP consumption. In some cases, socializing can draw individuals to consume SUPs through performing a practice such as going for coffee with a friend. The onset of the pandemic changed these dynamics because various restrictions did not allow for such situations to occur. In detail, while restaurant eating was previously seen as a social practice, the inability to partake in this practice at times during the pandemic led to different dynamics of socializing in the practice of takeout. Additionally, there were new social pressures regarding acceptable activities in the pandemic, as the practice of getting coffee was seen as one of the only acceptable ways to socialize. *Everyday Life in a Pandemic: An International Comparative Sociological Study* (n.d.) found similar findings to this thesis regarding the dynamics of food provision and socializing in everyday practices.

Risk aversion in regard to contracting the virus also increasingly became an element of concern among practitioners in performing their practices during the COVID-19 pandemic. Though risk aversion impacted practices, it did not largely impact the use of SUPs within the practice, rather, it changed the dynamics of the practice as a whole. This had an impact on both socializing and the frequency at which practices were performed.

Ultimately, the breadth and length of the answer to this study's main research question shows the developments that it provides in understanding SUP consumption. Thinking back on the questions I posed in the first lines of this report, "If you were to be asked how much plastic you consume in a day, would you be able to answer with a (semi-)definite answer? How much of this plastic is only used once before it is thrown out? How has this changed throughout the COVID-19 pandemic? Do you view or use plastics differently?", the responses to these questions should be more definitive. The answers will vary for each reader, but the intent of the questions stays the same: to explore ways to improve the sustainable consumption of SUPs. In doing so, the social practice perspective is valuable to policy makers as it leads towards an inclusive understanding of SUP consumption. The various social dynamics, practices, and impacts of the COVID-19 pandemic as studied in this thesis provide many avenues that can be used to contribute to SUP policies. Understanding the rich detail of the SUP consumption is an important starting point to improving the sustainability of single-use plastics and to providing a variety of policy options that each incorporate technical, structural, behavioural, and practice paradigms.

References

- Alberta Beverage Container Recycling Corporation. (n.d.). *About ABCRC*. Retrieved May 7, 2021, from <https://www.abcrc.com/about-us/about-abcrc/>
- Alberta Depot. (n.d.). *Frequently Asked Questions*. Retrieved May 7, 2021, from <https://albertadepot.ca/recycling-101/frequently-asked-questions/>
- Arsel, Z. (2017). Asking questions with reflexive focus: A tutorial on designing and conducting interviews. *Journal of Consumer Research*, 44(4), 939–948.
<https://doi.org/10.1093/jcr/ucx096>
- Bartlett, R., & Milligan, C. (2015). Engaging with diary techniques. In *What is Diary Method?* (Issue October, pp. 13–28). Bloomsbury Collections.
<https://doi.org/10.5040/9781472572578.ch-002>
- Blaikie, N. (2004). Interpretivism. In M. Lewis-Beck, A. Bryman, & T. F. Liao (Eds.), *The Sage Encyclopedia of Social Science Research Methods* (pp. 509–510). SAGE.
- Blake, J. (1999). Overcoming the “value-action gap” in environmental policy: Tensions between national policy and local experience. *Local Environment*, 4(3), 257–278.
<https://doi.org/10.1080/13549839908725599>
- Bläsing, M., & Amelung, W. (2018). Plastics in soil: Analytical methods and possible sources. *Science of the Total Environment*, 612, 422–435.
<https://doi.org/10.1016/j.scitotenv.2017.08.086>
- Blaze Baum, K. (2020, March 11). Ottawa set to declare plastics as toxic substance. *The Globe and Mail*. <https://www.theglobeandmail.com/canada/article-ottawa-set-to-declare-plastics-as-toxic-substance/>
- Block, E., Goldenberg, A., & Waschuk, G. (2020). *COVID-19: Can they do that? Part IV: Alberta’s Public Health Act and Emergency Management Act*.
<https://www.mccarthy.ca/en/insights/articles/covid-19-can-they-do-part-iv-albertas-public-health-act-and-emergency-management-act>
- Blumer, H. (1954). What is Wrong with Social Theory? *American Sociological Review*, 19(1), 3–10. <https://doi.org/10.2307/2088165>
- Brand, K.-W. (2010). Social Practices and Sustainable Consumption: Benefits and Limitations of a New Theoretical Approach. In M. Gross & H. Heinrichs (Eds.), *Environmental Sociology: European Perspectives and Interdisciplinary Challenges* (pp. 217–235).
<https://doi.org/10.1007/978-90-481-8730-0>
- Canada Gazette. (2021, May 12). Order Adding a Toxic Substance to Schedule 1 to the Canadian Environmental Protection Act, 1999: SOR/2021-86. *Canada Gazette*.
<https://canadagazette.gc.ca/rp-pr/p2/2021/2021-05-12/html/sor-dors86-eng.html>
- Cass, N., Doughty, K., Faulconbridge, J., & Murray, L. (2015). *Ethnographies of Mobilities and Disruption*.
<https://cris.brighton.ac.uk/ws/portalfiles/portal/353689/WP2+Disruption+report+final+March+2015.pdf>
- Castelo, A. F. M., Schäfer, M., & Silva, M. E. (2021). Food practices as part of daily routines: A conceptual framework for analysing networks of practices. *Appetite*, 157(July 2020).
<https://doi.org/10.1016/j.appet.2020.104978>
- Chappells, H., & Trentmann, F. (2019). Disruption in and across time. In E. Shove & F. Trentmann (Eds.), *Infrastructures in Practice: The Dynamics of Demand in Networked Societies* (pp. 197–209). Routledge.

- Corsini, F., Laurenti, R., Meinherz, F., Appio, F. P., & Mora, L. (2019). The advent of practice theories in research on sustainable consumption: Past, current and future directions of the field. *Sustainability*, *11*(2), 341. <https://doi.org/10.3390/su11020341>
- Cunningham, S. (2020, March 19). *Save-On-Foods temporarily bans reusable bags amid COVID-19 crisis*. CTV News. <https://vancouverisland.ctvnews.ca/save-on-foods-temporarily-bans-reusable-bags-amid-covid-19-crisis-1.4860576>
- de Feijter, F. J., van Vliet, B. J. M., & Chen, Y. (2019). Household inclusion in the governance of housing retrofitting: Analysing Chinese and Dutch systems of energy retrofit provision. *Energy Research and Social Science*, *53*(March), 10–22. <https://doi.org/10.1016/j.erss.2019.02.006>
- Devaux, F. (2020). *Food practices under Lockdown in France*. *Everyday Life in a Pandemic: An International Comparative Sociological Study*. <https://everydaylifeinapandemic.wordpress.com/2020/10/22/food-practices-under-lockdown-in-france/>
- Ellsworth-Krebs, K., & Anantharaman, M. (2020). *Partisan experiences of Covid-19 in the United States of America*. *Everyday Life in a Pandemic: An International Comparative Sociological Study*. <https://everydaylifeinapandemic.wordpress.com/2020/11/25/partisan-experiences-of-covid-19-in-the-united-states-of-america/>
- Environment and Climate Change Canada. (n.d.). *Discussion paper: A proposed integrated management approach to plastic products to prevent waste and pollution*. <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/plastics-proposed-integrated-management-approach.html>
- Environment and Climate Change Canada. (2020). *Canada one-step closer to zero plastic waste by 2030*. <https://www.canada.ca/en/environment-climate-change/news/2020/10/canada-one-step-closer-to-zero-plastic-waste-by-2030.html>
- Evans, D. M., Parsons, R., Jackson, P., Greenwood, S., & Ryan, A. (2020). Understanding plastic packaging: The co-evolution of materials and society. *Global Environmental Change*, *65*(July), 102166. <https://doi.org/10.1016/j.gloenvcha.2020.102166>
- Everyday Life in a Pandemic: an international comparative sociological study*. (n.d.). Retrieved July 14, 2021, from <https://everydaylifeinapandemic.wordpress.com>
- Extended Producer Responsibility (EPR) for Packaging, Paper Products, Single-Use Plastics, as well as Hazardous and Special Products*. (n.d.). Retrieved October 7, 2021, from https://ehq-production-canada.s3.ca-central-1.amazonaws.com/b5ab59d56624a11a81f1dae064b90702ea5d0191/original/1615995461/ac3406e92ca52daee5b251620073ebb_aep-EPR-discussion-paper.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIBJCUK4ZO4WUUA%252
- Feder, M., Block, E., Goldenberg, A., & Marsh, K. (2020). *COVID-19: Limits on Governments' Emergency Powers*. <https://www.mccarthy.ca/en/insights/articles/covid-19-limits-governments-emergency-powers>
- Fine, B., Bayliss, K., & Robertson, M. (2018). The Systems of Provision Approach to Understanding Consumption. In O. Kravets, P. Maclaran, S. Miles, & A. Venkatesh (Eds.), *The SAGE Handbook of Consumer Culture* (pp. 27–42). http://web.a.ebscohost.com.ezproxy.library.wur.nl/ehost/ebookviewer/ebook/bmxlYmtfXzE2NjY5OTdfX0FO0?sid=57733a3e-dc0c-46a4-a1ba-bffaed05bec3@sessionmgr4007&vid=0&format=EB&lpid=lp_27&rid=0

- Fine, B., & Leopold, E. (1993). *The World of Consumption*. Routledge.
- Geels, F. W., McMeekin, A., Mylan, J., & Southerton, D. (2015). A critical appraisal of Sustainable Consumption and Production research: The reformist, revolutionary and reconfiguration positions. *Global Environmental Change*, 34, 1–12. <https://doi.org/10.1016/j.gloenvcha.2015.04.013>
- Geyer, R., Jambeck, J. R., & Law, K. L. (2017). Production, use, and fate of all plastics ever made. *Science Advances*, 3(7), 25–29. <https://doi.org/10.1126/sciadv.1700782>
- Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*. University of California Press.
- Giddens, A. (1991). *Modernity and self-identity: self and society in the late modern age*. Polity Press.
- Google. (n.d.). [Map of Western Canada]. Retrieved August 11, 2021, from <https://www.google.com/maps/@56.1792741,-114.2410906,4.66z>
- Government of Alberta. (n.d.-a). *COVID-19 Alberta Statistics: Interactive aggregate data on COVID-19 cases in Alberta (Figure 6)*. [Screenshot]. Retrieved August 13, 2021, from <https://www.alberta.ca/stats/covid-19-alberta-statistics.htm#total-cases>
- Government of Alberta. (n.d.-b). *COVID-19 info for Albertans*. Web Archive. Retrieved November 16, 2020, from <https://web.archive.org/web/20200316231634/https://www.alberta.ca/coronavirus-info-for-albertans.aspx> and <https://web.archive.org/web/20200328230313/https://www.alberta.ca/coronavirus-info-for-albertans.aspx>
- Government of Alberta. (n.d.-c). *COVID-19 Update*. Government News. Retrieved November 13, 2020, from <https://www.alberta.ca/release.cfm?xID=7455905E9E0A2-E094-5964-5274A551F89BF879> and <https://www.alberta.ca/release.cfm?xID=756927430390D-E7C5-440A-32D359C85E48294A> and January 12, 2021 from, <https://www.alberta.ca/release.cfm?xID=76019B9A6602A-DC26-45FF-34BC523779AED766>
- Government of Alberta. (n.d.-d). *Enhanced Public health Measures*. Retrieved November 25, 2020, January 17, 2021, and February 2, 2021, from <https://www.alberta.ca/enhanced-public-health-measures.aspx>
- Government of Alberta. (n.d.-e). *Stronger public health measures*. Retrieved December 10, 2020, from <https://www.alberta.ca/enhanced-public-health-measures.aspx>
- Government of Alberta. (2020a). *Alberta moves into full Step 2 of Path Forward | L'Alberta complète la 2e étape de son plan d'assouplissement progressif des restrictions liées à la COVID-19*. Government News. <https://www.alberta.ca/release.cfm?xID=77679C801C48D-B9CB-2F2A-D711CC20DC34D54D>
- Government of Alberta. (2020b). *Opening Soon: Alberta's Relaunch Strategy*. <https://open.alberta.ca/dataset/61f54c09-d6d7-4a12-a5be-0bc663a02c31/resource/e158ff14-eab7-4f24-94f4-b67c3639d0d5/download/covid-19-alberta-relaunch-strategy-2020-06.pdf>
- Government of Canada. (n.d.-a). *Discover Canada - How Canadians Govern Themselves*. Retrieved August 5, 2021, from <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/discover-canada/read-online/how-canadians-govern-themselves.html>

- Government of Canada. (n.d.-b). *The constitutional distribution of legislative powers*. Retrieved August 5, 2021, from <https://www.canada.ca/en/intergovernmental-affairs/services/federation/distribution-legislative-powers.html>
- Gram-Hanssen, K. (2008). Consuming technologies - developing routines. *Journal of Cleaner Production*, *16*(11), 1181–1189. <https://doi.org/10.1016/j.jclepro.2007.08.006>
- Gram-Hanssen, K. (2011). Understanding change and continuity in residential energy consumption. *Journal of Consumer Culture*, *11*(1), 61–78. <https://doi.org/10.1177/1469540510391725>
- Greene, M. (2017). *Energy Biographies: Exploring the intersections between lives, practices and contexts* [National University of Ireland]. https://aran.library.nuigalway.ie/bitstream/handle/10379/6888/Greene_PhD_FINAL.pdf?sequence=1
- Greene, M., Hansen, A., Hoolohan, C., Süßbauer, E., & Domaneschi, L. (in press). Consumption and shifting temporalities of daily life in times of disruption: Undoing and reassembling household practices during the COVID-19 pandemic. In *Sustainability: Science, Practice and Policy*.
- Greene, M., Volden, J., Ellsworth-Krebs, K., Fox, E., & Anantharaman, M. (in press). Practicing culture: Exploring the implications of pre-existing mobility cultures on (post-)pandemic practices in Norway, Ireland, and the USA. In *Sustainability: Science, Practice and Policy*.
- Hagberg, J. (2016). Agencing practices: a historical exploration of shopping bags. *Consumption Markets & Culture*, *19*(11), 111–132. <https://doi.org/https://doi.org/10.1080/10253866.2015.1067200>
- Halkier, B., & Jensen, I. (2011). Methodological challenges in using practice theory in consumption research. Examples from a study on handling nutritional contestations of food consumption. *Journal of Consumer Culture*, *11*(1), 101–123. <https://doi.org/10.1177/1469540510391365>
- Heidbreder, L. M., Bablok, I., Drews, S., & Menzel, C. (2019). Tackling the plastic problem: A review on perceptions, behaviors, and interventions. *Science of the Total Environment*, *668*, 1077–1093. <https://doi.org/10.1016/j.scitotenv.2019.02.437>
- Herring, J. (2020, September 4). Six months: A Timeline of COVID-19 in Alberta. *Calgary Herald*. <https://calgaryherald.com/news/six-months-a-timeline-of-covid-19-in-alberta>
- Hitchings, R. (2012). People can talk about their practices. *Area*, *44*(1), 61–67. <https://doi.org/10.1111/j.1475-4762.2011.01060.x>
- Horton, A. A., Walton, A., Spurgeon, D. J., Lahive, E., & Svendsen, C. (2017). Microplastics in freshwater and terrestrial environments: Evaluating the current understanding to identify the knowledge gaps and future research priorities. *Science of the Total Environment*, *586*, 127–141. <https://doi.org/10.1016/j.scitotenv.2017.01.190>
- Hui, A., Schatzki, T., & Shove, E. (2017). Introduction. In A. Hui, T. Schatzki, & E. Shove (Eds.), *The Nexus of Practices: Connections, constellations, practitioners* (1st ed., pp. 1–7). Routledge.
- Jambeck, J., Geyer, R., Wilcox, C., Siegler, T. R., Perryman, M., Andrady, A., Narayan, R., & Law, K. L. (2015). Plastic waste inputs from land into the ocean. *Science*, *347*(6223), 768–771. <https://doi.org/10.1126/science.1260352>

- Johnson, P. (2011). Inductive Analysis. In R. Miller & J. Brewer (Eds.), *The Sage Dictionary of Qualitative Management Research* (pp. 113–115). SAGE Publications Ltd.
<https://doi.org/https://dx.doi.org/10.4135/9780857020109>
- Kampf, G., Todt, D., Pfaender, S., & Steinmann, E. (2020). Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents. *Journal of Hospital Infection*, 104(3), 246–251. <https://doi.org/10.1016/j.jhin.2020.01.022>
- Keller, J. (2020, October 9). Ottawa’s new plastics designation will hurt Alberta’s recover, Jason Kenney says. *The Globe and Mail*.
<https://www.theglobeandmail.com/canada/alberta/article-ottawas-new-plastics-designation-will-hurt-albertas-recovery-jason/>
- Keller, M., Halkier, B., & Wilska, T. A. (2016). Policy and Governance for Sustainable Consumption at the Crossroads of Theories and Concepts. *Environmental Policy and Governance*, 26(2), 75–88. <https://doi.org/10.1002/eet.1702>
- Kennedy, E. H., Cohen, M. J., & Krogman, N. T. (2015). Social practice theories and research on sustainable consumption. In E. H. Kennedy, M. J. Cohen, & N. T. Krogman (Eds.), *Putting Sustainability into Practice: Applications and Advances in Research on Sustainable Consumption* (pp. 3–22). Edward Elgar Publishing.
<https://doi.org/10.4337/9781784710606.00009>
- Kitz, R., Walker, T., Charlebois, S., & Music, J. (2021). Food packaging during the COVID-19 pandemic: Consumer perceptions. *International Journal of Consumer Studies*, March, 1–15.
<https://doi.org/10.1111/ijcs.12691>
- Klemeš, J. J., Fan, Y. Van, Tan, R. R., & Jiang, P. (2020). Minimising the present and future plastic waste, energy and environmental footprints related to COVID-19. *Renewable and Sustainable Energy Reviews*, 127(April). <https://doi.org/10.1016/j.rser.2020.109883>
- Lapadat, J. (2010). Thematic Analysis. In A. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (pp. 926–927). SAGE Publications, Inc.
<https://doi.org/10.4135/9781412957397>
- Leeds-Hurwitz, W. (2009). Social Construction of Reality. In *Encyclopedia of Communication Theory* (pp. 892–895). SAGE Publications, Inc. <https://doi.org/10.4135/9781412959384> NV
 - 2
- Li, W. C., Tse, H. F., & Fok, L. (2016). Plastic waste in the marine environment: A review of sources, occurrence and effects. *Science of the Total Environment*, 566–567, 333–349.
<https://doi.org/10.1016/j.scitotenv.2016.05.084>
- Life with Corona Network. (2020). *Life with Corona: Shared Global Sentiments and Stark Generational Divides*. <https://lifewithcorona.org/six-months-report/>
- Liu, W., Oosterveer, P., & Spaargaren, G. (2016). Promoting sustainable consumption in China: a conceptual framework and research review. *Journal of Cleaner Production*, 134, 13–21.
<https://doi.org/10.1016/j.jclepro.2015.10.124>
- Loseke, D. R. (2013). *Methodological Thinking: Basic Principles of Social Research Design*. SAGE. <https://doi.org/10.4135/9781071802700>
- Maréchal, G. (2010). Constructivism. In A. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (pp. 221–225). SAGE Publications, Inc.
<http://dx.doi.org/10.4135/9781412957397>
- Meth, P. (2003). Entries and omissions: Using solicited diaries in geographical research. *Area*, 35(2), 195–205. <https://doi.org/10.1111/1475-4762.00263>

- Morgana, S., Casentini, B., & Amalfitano, S. (2021). Uncovering the release of micro/nanoplastics from disposable face masks at times of COVID-19. *Journal of Hazardous Materials*, 419(April), 126507. <https://doi.org/10.1016/j.jhazmat.2021.126507>
- Mylan, J. (2015). Understanding the diffusion of Sustainable Product-Service Systems: Insights from the sociology of consumption and practice theory. *Journal of Cleaner Production*, 97, 13–20. <https://doi.org/10.1016/j.jclepro.2014.01.065>
- Nicolini, D. (2012). *Practice Theory, Work, and Organization: an Introduction*. Oxford University Press.
- Nielsen, T. D., Hasselbalch, J., Holmberg, K., & Stripple, J. (2020). Politics and the plastic crisis: A review throughout the plastic life cycle. *Wiley Interdisciplinary Reviews: Energy and Environment*, 9(1), 1–18. <https://doi.org/10.1002/wene.360>
- OECD. (2020). *Session 5: Gender-specific consumption patterns, behavioural insights, and circular economy*. <https://www.oecd.org/env/GFE-Gender-Issues-Note-Session-5.pdf>
- Patrício Silva, A. L., Prata, J. C., Walker, T. R., Duarte, A. C., Ouyang, W., Barcelò, D., & Rocha-Santos, T. (2021). Increased plastic pollution due to COVID-19 pandemic: Challenges and recommendations. *Chemical Engineering Journal*, 405(2021), 126683. <https://doi.org/10.1016/j.cej.2020.126683>
- Prata, J. C., Silva, A. L. P., Walker, T. R., Duarte, A. C., & Rocha-Santos, T. (2020). COVID-19 Pandemic Repercussions on the Use and Management of Plastics. *Environmental Science and Technology*, 54(13), 7760–7765. <https://doi.org/10.1021/acs.est.0c02178>
- Reckwitz, A. (2002). Toward a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory*, 5(2), 245–263.
- Rinkinen, J., Shove, E., & Smits, M. (2019). Cold chains in Hanoi and Bangkok: Changing systems of provision and practice. *Journal of Consumer Culture*, 19(3), 379–397. <https://doi.org/10.1177/1469540517717783>
- Røpke, I. (2009). Theories of practice - New inspiration for ecological economic studies on consumption. *Ecological Economics*, 68(10), 2490–2497. <https://doi.org/10.1016/j.ecolecon.2009.05.015>
- Saadat, S., Rawtani, D., & Hussain, C. M. (2020). Environmental perspective of COVID-19. *Science of the Total Environment*, 728, 138870. <https://doi.org/10.1016/j.scitotenv.2020.138870>
- Sattlegger, L., Stieß, I., Raschewski, L., & Reindl, K. (2020). Plastic packaging, food supply, and everyday life adopting a social practice perspective in social-ecological research. *Nature and Culture*, 15(2), 146–172. <https://doi.org/10.3167/NC.2020.150203>
- Schwandt, T. (2007). *The SAGE Dictionary of Qualitative Inquiry* (3 NV-0). <https://doi.org/10.4135/9781412986281>
- Shah, M. (2020, March 6). *Why coffee shops are banning reusable cups amid coronavirus concerns*. Global News. <https://globalnews.ca/news/6641187/coffee-shop-reusable-mug-coronavirus/>
- Shen, M., Zeng, Z., Song, B., Yi, H., Hu, T., Zhang, Y., Zeng, G., & Xiao, R. (2021). Neglected microplastics pollution in global COVID-19: Disposable surgical masks. *Science of the Total Environment*, 790, 148130. <https://doi.org/10.1016/j.scitotenv.2021.148130>
- Shove, E. (2003a). *Comfort, cleanliness & convenience: the social organisation of normality*. Berg Publishers.

- Shove, E. (2003b). Converging Conventions of Comfort, Cleanliness and Convenience. *Journal of Consumer Policy*, 26(4), 395–418. <https://doi.org/10.1023/a:1026362829781>
- Shove, E. (2010). Beyond the ABC: Climate change policy and theories of social change. *Environment and Planning A*, 42(6), 1273–1285. <https://doi.org/10.1068/a42282>
- Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. SAGE.
- Shove, E., Watson, M., Hand, M., & Ingram, J. (2007). *The Design of Everyday Life*. Berg Publishers.
- Sigler, M. (2014). The effects of plastic pollution on aquatic wildlife: Current situations and future solutions. *Water, Air, and Soil Pollution*, 225(11). <https://doi.org/10.1007/s11270-014-2184-6>
- Southerton, D., Chappells, H., & van Vliet, B. (2004). *Sustainable Consumption: The Implications of Changing Infrastructures of Provision*. Edward Elgar Publishing.
- Spaargaren, G. (2000). Ecological modernization theory and domestic consumption. *Journal of Environmental Policy & Planning*, 2(4), 323–335. <https://doi.org/10.1080/714038564>
- Spaargaren, G. (2003). Sustainable consumption: A theoretical and environmental policy perspective. *Society and Natural Resources*, 16(8), 687–701. <https://doi.org/10.1080/08941920309192>
- Spaargaren, G. (2011). Theories of practices: Agency, technology, and culture. Exploring the relevance of practice theories for the governance of sustainable consumption practices in the new world-order. *Global Environmental Change*, 21(3), 813–822. <https://doi.org/10.1016/j.gloenvcha.2011.03.010>
- Spaargaren, G. (2013). The cultural dimension of sustainable consumption practices: an exploration in theory and policy. In M. J. Cohen, H. S. Brown, & P. J. Vergragt (Eds.), *Innovations in Sustainable Consumption: New Economics, Socio-technical Transitions and Social Practices* (pp. 229–251). Edward Elgar Publishing.
- Spaargaren, G., Lamers, M., & Weenink, D. (2016). Introduction: using practice theory to research social life. In G. Spaargaren, D. Weenink, & M. Lamers (Eds.), *Practice Theory and Research: Exploring the Dynamics of Social Life* (pp. 3–27). Routledge. <https://doi.org/10.4324/978131565690>
- Spaargaren, G., & van Vliet, B. (2000). Lifestyles, consumption and the environment: The ecological modernization of consumption. *Environmental Politics*, 9(1), 50–76. <https://doi.org/10.1080/09644010008414512>
- Statistics Canada. (n.d.). *Population and Dwelling Count Highlight Tables, 2016 Census*. Retrieved August 11, 2021, from <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/pd-pl/Table.cfm?Lang=Eng&T=201&S=3&O=D>
- Stebbins, R. (2001). What Is Exploration? In *Exploratory Research in the Social Sciences* (pp. 2–17). SAGE Publications, Inc. <https://doi.org/10.4135/9781412984249.n1>
- The City of Calgary. (n.d.-a). *About Waste & Recycling Services*. Retrieved August 5, 2021, from <https://www.calgary.ca/uep/wrs/about-wrs/about-wrs.html>
- The City of Calgary. (n.d.-b). *Calgary's waste and recycling history*. Retrieved August 1, 2021, from <https://www.calgary.ca/uep/wrs/about-wrs/calgary-waste-recycling-history.html>
- The City of Calgary. (n.d.-c). *Calgary Recycling Facts*. Retrieved August 1, 2021, from <https://www.calgary.ca/uep/wrs/recycling-information/residential-services/blue-cart-recycling/recycle-facts.html>

- The City of Calgary. (n.d.-d). *How to use your carts*. <https://www.calgary.ca/uep/wrs/recycling-information/residential-services/blue-cart-recycling/using-your-blue-cart.html>
- The City of Calgary. (n.d.-e). *Recycling in Calgary*. Retrieved August 1, 2021, from <https://www.calgary.ca/uep/wrs/recycling-information/residential-services/blue-cart-recycling/how-recycling-works.html>
- The City of Calgary. (n.d.-f). *Single-use items waste reduction strategy*. Retrieved November 11, 2020, from <https://engage.calgary.ca/single-use>
- The City of Calgary. (n.d.-g). *What goes where: Compostable cutlery*. Retrieved August 1, 2021, from <https://www.calgary.ca/uep/wrs/what-goes-where/compostable-cutlery.html>
- The City of Calgary. (n.d.-h). *What goes where: Plastic - Coffee cup/fountain pop lids*. Retrieved August 1, 2021, from <https://www.calgary.ca/content/www/en/home/uep/wrs/what-goes-where/plastic-coffee-cup-lids.html?q=Coffee cup lid>
- The City of Calgary. (n.d.-i). *What goes where: Wrappers - Potato chip bags*. Retrieved August 1, 2021, from <https://www.calgary.ca/content/www/en/home/uep/wrs/what-goes-where/potato-chip-bags.html?q=Potato chip bag>
- The City of Calgary. (2020). *COVID-19 - Face Coverings By-law*. Retrieved November 11, 2020, from <https://www.calgary.ca/csps/cema/covid19/safety/covid-19-city-of-calgary-mask-bylaw.html>
- UNEP. (2018). *Single-use Plastics: A Roadmap for Sustainability*.
- van Doremalen, N., Bushmaker, T., Morris, D. H., Holbrook, M. G., Gamble, A., Williamson, B. N., Azaibi, T., Harcourt, J. L., Thornburg, N. J., Gerber, S. J., Lloyd-Smith, J. O., de Wit, E., & Munster, V. (2020). Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-Cov-1. *The New England Journal of Medicine*, 38(16), 1564–1567. <https://doi.org/DOI:10.1056/NEJMc2004973>
- Volden, J. (2020). *Everyday Life in a Pandemic: Norway*. *Everyday Life in a Pandemic: An International Comparative Sociological Study*. <https://everydaylifeinapandemic.wordpress.com/2020/09/11/everyday-life-in-a-pandemic-norway/>
- Warde, A. (2005). Consumption and Theories of Practice. *Journal of Consumer Policy*, 5(2), 131–153. <https://doi.org/DOI: 10.1177/1469540505053090>
- Welch, D., & Warde, A. (2015). Theories of practice and sustainable consumption. In L. Reisch & J. Thøgersen (Eds.), *Handbook of Research on Sustainable Consumption* (pp. 84–100). Edward Elgar Publishing. <https://doi.org/10.4337/9781783471270.00013>
- Woo, A., Lee, C., Cyr, A., & Keller, J. (2021, July 29). Alberta's plan to lift COVID-19 rules has many asking how to protect against the virus. *The Globe and Mail*. <https://www.theglobeandmail.com/canada/alberta/article-albertas-plan-to-lift-covid-19-rules-has-many-asking-how-to-protect/>

Appendices

Appendix 1: Interview Guides and Diary Template

Interview 1

Note:

- Focus on and probe the things the participants see as normal/common sense as to get them to express this in words. Probe into how these relate to the practices that they undertake.
- Focus and probe for experiences and concrete examples of practices of performances
 - o “Can you give me an example?”

Note: Nice ways to say ‘why?’:

- “Can you tell me a bit more?”
- “Can you tell me why you say that?” / “why do you say that?”
- “Can you tell me about that experience...?”
- “Can you elaborate a bit more on when you do that...?”
- “Can you elaborate on that?”

Goals:

- Introduction to the project
- Discuss daily life with a focus on mobility and food provision
- Discuss SUP consumption in daily life
- Discuss changes in practices and SUP consumption during the pandemic – go through the last 9 months
- Probe into cultural norms and relationships between demographic and SUP consumption

Introduce the project, my background and my role, ask for permission to record, and get them to sign the participation form. Talk about ethics (should be in the participation form).

To start, can you tell me a bit about yourself?

- PROBE: job, role in life, background, education, interests, etc.

Can you go through your daily life for me? As in, what do you do in a day from the time that you wake up to the time that you go to bed at night?

- PROBE:
 - o Does your day vary a lot from day to day?
 - o Who do you interact with on a daily basis?

How has your daily life changed since COVID-19?

- PROBE:
 - o How does this differ now vs. the beginning of the pandemic? Before the pandemic?
 - o How has your mobility changed?

- How has your food related activities changed?
- Probe for challenges - were there any challenges in adjusting to life in the pandemic?

SUPs

Probe into:

- Challenges and experiences
- Different experiences between the same people in the household, occupation, etc.
- Different contexts and uses in different contexts.

Explain single-use plastics and what they are in this study (see Can gov. classifications – Show collage of the SUPs on screen). Of course, this is an example of various single-use plastics (to get thinking going), but it is not an exhaustive list. They are organised kind of by practice (food on the go, shopping, PPE, and extras). As part of my research, I am focusing on food and mobility, so these pictures are organized kind of in little groups. Let's go through each of these groups.

Given the collage, which ones do you use the most?

- PROBE:
 - Why?
 - Which ones do you use less?
 - How often?
 - Can you give an example of **when/how** these ones are used?
 - When are they used? In different social contexts? People? Places?

Which plastics don't you use? Use less?

- PROBE:
 - Why don't you use the specific plastics? is there a reason why you *specifically* don't use certain plastics?
 - How often are they used instead then? Weekly? Only on certain days (i.e., shopping days)?

Which plastics do you use daily?

- PROBE:
 - Why are they used daily?
 - At what times of the day?
 - Examples?
 - How do you use these plastics daily?
 - Do you ever have difficulties in using single-use plastics?

Explain the food and food on the go SUPs...These SUPs are generally related to food practices (that is cooking, eating, shopping) and mobility (getting around).

Can you go through which plastics you use?

- PROBE:
 - Can you give examples of how/when you use them?
 - If not already clear, where do you use them?
 - Why do you use them?
 - How does it differ between social settings (e.g. at home vs. out with friends)
 - **Materiality** – are they used with other materials or not used with certain materials? → When thinking of how you use ____ plastic, do you ever use them with other materials/objects? Do you *not* use them with other materials or objects?

What are the biggest reasons you use these specific plastics?

Which ones don't you use?

- PROBE:
 - What are the biggest reasons you don't use [*specific*] plastics?

Are there other ones that you use related to food that aren't in the collage? (Cooking? Shopping? Packaging? Food on the go?)

- PROBE:
 - When don't you use them?
 - [*given the examples above*] What purpose do they serve related to food? (Why?)
 - Can you give examples of your plastic use in your food related activities?

Can you talk about the single-use plastics that you use during mobility? That is when you move to different places during the day (e.g., getting to work, leaving the house, shopping).

- PROBE:
 - When do you use single-use plastics related to mobility? (Food on the go? when driving to work? taking the bus?)
 - When don't you use them?
 - Which ones do you use?
 - How do you use them in your daily life?
 - [*given the examples above*] What purpose do they serve related to mobility? (Why?)
 - Can you give examples?

Explain the Shopping and Extra SUPs...

Can you go through which plastics you use?

- PROBE:
 - Can you give examples of how/when you use them?
 - If not already clear, where do you use them?
 - Why do you use them?
 - How does it differ between social settings (e.g. at home vs. out with friends)
 - **Materiality** – are they used with other materials or not used with certain materials? → When thinking of how you use ____ plastic, do you ever use them with other materials/objects? Do you *not* use them with other materials or objects?

What are the biggest reasons you use these specific plastics?

Which ones don't you use?

- PROBE:
 - o What are the biggest reasons you don't use *[specific]* plastics?

Are there other ones that you use related to shopping that aren't in the collage? (Food on the go?)

- PROBE:
 - o When don't you use them?
 - o *[given the examples above]* What purpose do they serve related to food? (Why?)
 - o Can you give examples of your plastic use in your food related activities?

Explain the PPE SUPs...

When do you use these? How? Why? Why not?

Are there plastics that you use that were missed in this collage?

COVID-19 and SUP Consumption

[Keep collage up on screen] ...given what we discussed above about single-use plastics, how has their use changed since the onset of the pandemic? *[go through the sections again]*

- PROBE:
 - o Do you use some more and some less? No longer daily?
 - o Are some more important now than before?
 - o Do you use them for different reasons?
 - o Do you use them differently?
 - o Examples?

I would like to go through the changes in your daily single-use plastic consumption *[from the ones that were mentioned above]* throughout the pandemic. *[show timeline of COVID-19 policies]*, looking at the timeline, can we go through your practices and your single-use plastic consumption during the various policies that were implemented during the pandemic?

- Explain that it's for the purpose of aiding memory of what it was like at that time.

Were there any changes in plastic consumption that stood out/stands out to you during the pandemic?

- PROBE:
 - o Why is that?

I have noticed and experienced that some stores/shops have implemented policies on bringing reusable materials (ex. Bags, cups, etc.) ... how has this affected you and your SUP consumption?

- PROBE:
 - o What are your thoughts on these policies?

Given the chart, can you talk a bit about the impact that the policies introduced by the various government bodies have had on your daily life, and relatedly your plastic consumption?

- PROBE:
 - o What are your thoughts on some of the policies that have been implemented?
 - o Probe into, “the gov. says” And underlying mentions about the policies.

If the pandemic was over tomorrow, would your single-use plastic consumption change from today to tomorrow?

- PROBE:
 - o If the pandemic ended 5 months ago, of 6 months ago. How would you SUP consumption have changed from the pandemic to the end of pandemic?

Conclusion and introduction to diary entries

Given our discussion today, do you have anything else that you’d like to add?

Introduce the Diary entries and explain how to properly fill them out

Finally, do you have any questions?

Daily Diary Template

Introduction

You are asked to complete these diary entries every day for 7 days straight. The exercise should take about 15-25 minutes per day, depending on how many activities you did. The purpose of these diary entries to better understand how single-use plastics are situated in the daily lives of you, the participant, as well as to serve as a chance to reflect on daily single-use plastic consumption.

I will send out a reminder (email or text) every night at 8pm. Please email me the completed diary entry at the end of each day. You are free to print out the diary template and fill it out with pen/pencil or you can fill it out electronically. If you choose to print the diary template, please take a picture of or scan the entry and email it to me once you have completed it.

General Guidelines:

- **Try not to change your behaviour during the week that you are filling out these diaries.** The goal of this research is for me, the researcher, to better understand your actions, routines, and daily behaviour, not to judge you or to change your behaviour. For this purpose, it is best to report your actual daily behaviours.
- **If you need more lines in the chart, please do not hesitate to add more.**
- If you choose to print the template, **please write clearly.**
- **Please (if possible) fill in the diary at the end of each day when most of your activities for the day are finished.**
- **Please be specific wherever possible.**

As always, if you have any questions, please don't hesitate to contact me by either phone or email:

Email: [REDACTED]

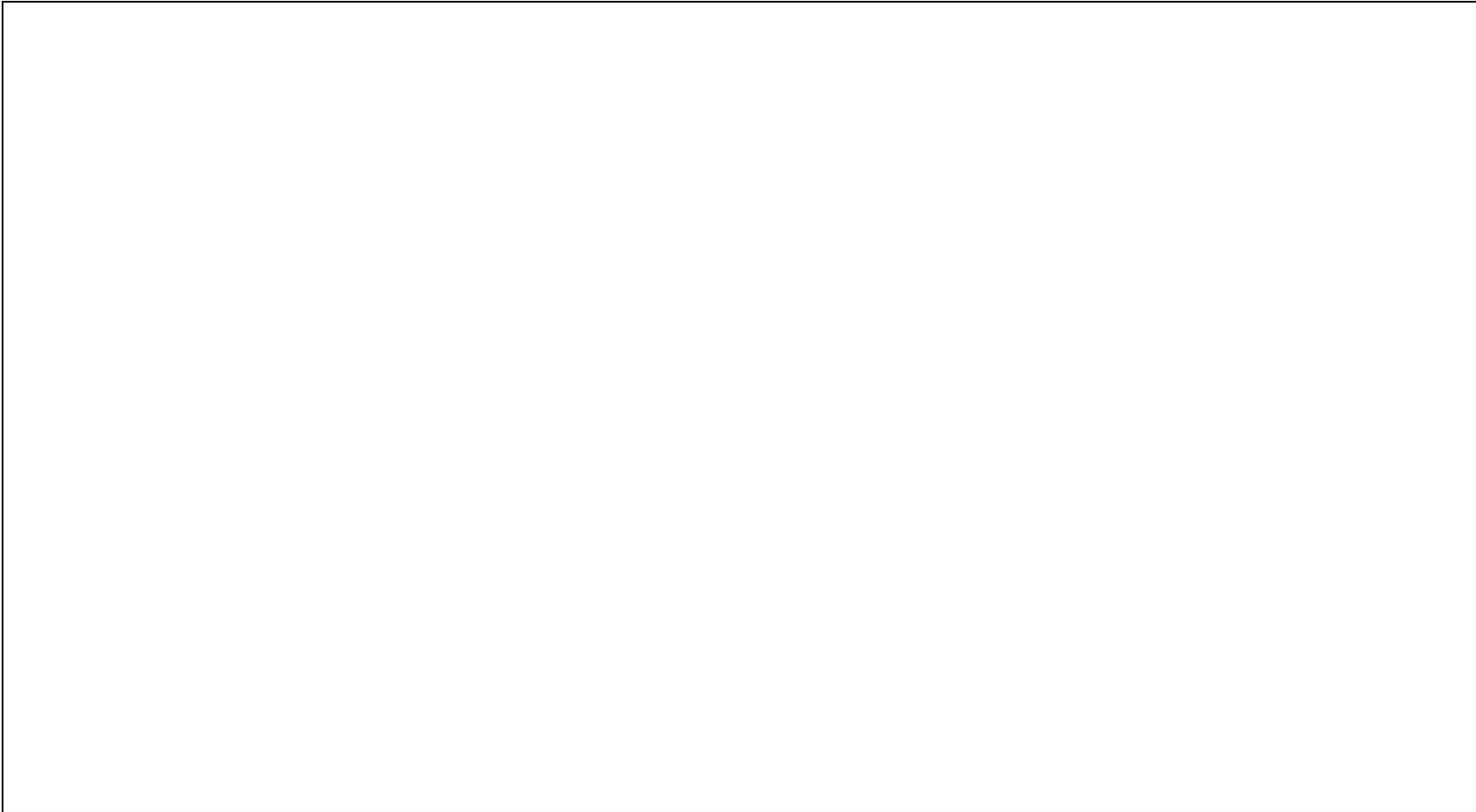
WhatsApp: [REDACTED]

Home phone: [REDACTED]

Date:

Time of completion:

Can you reflect on the activities of your day today?

A large, empty rectangular box with a thin black border, intended for the user to write their reflection on the day's activities.

Food

Please fill in the following information regarding your cooking and eating today.

Activity	Time	Place	Did anybody join the activity? If so, who?	Materials used - including cookware, packaging, appliances, and/or containers.	Was the meal homecooked, or was it ordered at/from a restaurant (i.e. delivery, take-out)	What did you eat?	Were any single-use plastics used during this meal?	If applicable, what purpose did the single-use plastic have during this meal?	If applicable, how did you dispose of the single-use plastic when finished with it? (e.g., garbage, compost, recycling)
<i>e.g., Dinner</i>	<i>18:00-19:00</i>	<i>Home</i>	<i>My husband</i>	<i>Plates, cutlery, food</i>	<i>Take-out</i>	<i>Chinese take-out</i>	<i>Plastic take-out container, plastic cutlery</i>	<i>Cutlery used to eat food, take-out container to hold food</i>	<i>Threw in garbage, except for take-out container as it is still holding leftovers.</i>
Breakfast									
Lunch									
Dinner									
Snack (1)									

Snack (2)									
--------------	--	--	--	--	--	--	--	--	--

Shopping

Instore Shopping

Did you shop in-store today? If yes, please fill out this chart. This includes shopping for food and non-food related items. For this chart, please only include stores which you physically entered today. If you have done any online shopping and received any packaged today, please fill out the chart below.

Which stores did you enter?	Time	Did anybody join the activity? If so, who?	Types of objects purchased	From the objects purchased, which are composed of, or packaged in, single-use plastics?	Did you buy/use a (new) plastic bag?	If applicable, what purpose did the single-use plastic have in this activity?	If applicable, how did you dispose of the single-use plastic when finished with it? (e.g., garbage, compost, recycling)
<i>e.g., Safeway</i>	<i>14:00-15:30</i>	<i>No</i>	<i>General groceries (fruits, vegetables, milk, bread), cleaning materials (garbage bags, Lysol wipes).</i>	<i>Wrapped my fruit in plastic produce bag, garbage bags, Lysol wipes Wore a plastic facemask in the store</i>	<i>no</i>	<i>To hold my fruit, for the purpose of collecting garbage (garbage bags) and for cleaning (Lysol wipes). Facemask To limit spread of COVID-19</i>	<i>Threw out facemask after use</i>
<i>e.g., Starbucks</i>	<i>14:00</i>	<i>No</i>	<i>Coffee</i>	<i>Paper cup with lid</i>	<i>no</i>	<i>To hold coffee</i>	<i>Threw cup in garbage and lid in recycling (blue bin)</i>

Online Shopping and Receiving Packages

If you have done online shopping recently, did you receive any packages today? If yes, please fill out chart the below. If no, please move to the mobility section below.

From which store did you receive your package?	Types of object(s) purchased	From the object(s) purchased, please describe the packaging which it/they arrived in	Where there any single-use plastics included in the packaging?	If applicable, what purpose did the single-use plastic have in this activity?	If applicable, how did you dispose of the single-use plastic when finished with it? (e.g., garbage, compost, recycling)
<i>i.e., Amazon</i>	<i>Nike shoes</i>	<i>A cardboard box, in which the shoes were wrapped in plastic</i>	<i>Plastic wrap</i>	<i>To protect the shoes</i>	<i>Thrown in recycling</i>

Mobility

Did you leave the house today? If yes, please fill out the chart below. If not, please move on to the next open section. Please fill each trip on a new row. If you made sequential trips (e.g., running errands), please place each leg of the trip on a new row.

Purpose of trip	Time Duration	Type of transportation (e.g., private car, bike, public transit, airplane, car sharing, walking)	Did anybody join you on this trip? If so, who?	Were any single-use plastics involved in this trip? If so, which ones?	If applicable, what purpose did the single-use plastic have in this activity?	If applicable, how did you dispose of the single-use packaging when finished with it? (e.g., garbage, compost, recycling)
<i>e.g., To go to hospital for appointment.</i>	<i>10:00-10:30</i>	<i>Bus and LRT (public transit)</i>	<i>no</i>	<i>Facemask</i>	<i>To prevent the spread of coronavirus.</i>	<i>Threw in garbage</i>
<i>e.g., To travel from Safeway to pick up kids from school</i>	<i>15:30-15:50</i>	<i>Drive in personal car</i>	<i>no</i>	<i>Plastic water bottle</i>	<i>I always have a plastic water bottle in the car when I'm on the go to ensure that I stay hydrated.</i>	<i>Threw water bottle in recycling (blue bin).</i>

How did your single-use plastic consumption vary today from yesterday, and can you reflect on why it varied?

Some things to think about are:

- Did you use different plastics? More or less of them? At different times of the day?
- What was different about your day today that caused the difference?

A large, empty rectangular box with a thin black border, intended for the user to write their reflections on plastic consumption.

Interview 2

Nice ways to say ‘why?’:

- “Can you tell me a bit more?”
- “Can you tell me why you say that?” / “why do you say that?”
- “Can you tell me about that experience...?”
- “Can you elaborate a bit more on when you do that...?”
- “Can you elaborate on that?”

Goals:

- Probe into specifics of diaries – to get more information about interesting things seen in the diaries
 - Revisit the changes in COVID-19 and probe into plastics in these changes and practices.
 - What helps or inhibits a practice from becoming durable over time?
 - Talk about social dynamics and probe into social/cultural norms.
-

Introduction

- Ask the participant how they are doing
- Explain that we will revisit what they said in their 1st interview and diary entries.

So, after having done the diary exercise, what was your experience with it?

- PROBE:
 - o Did it influence your actions? How?
 - o How did it impact your impression of your daily routines?
-

SUPs

Is your plastic use something that you have considered before?

- PROBE:
 - o Do you notice plastics in your day?

Part of my research is focusing on how plastics fit in your everyday lives and understanding how your daily routines of food and mobility are completed and the knowledge around how plastics fit in daily routines.

How are your *[insert examples of plastics and practices that use a lot of plastics]* used differently in different social settings? (With friends, or at work, or when by self, depending on mood, with one group of people or other groups).

- PROBE:
 - o Why?
 - o What makes it different? What made you use *[insert specific examples]* plastic in one situation and not in another?
 - o Any challenges related to the above? Can you give an example?

- Do you think your plastic use influences other people? Do other people's plastic use influence yours?

[insert specifics about disposal of plastics seen from diary entries] ... Can you tell me about why you do what you do with them after you've finished using [insert examples of plastics] plastics?

- PROBE:

- What affects your disposal of single-use plastics? Does it differ in places, social settings, when you're by yourself, or when you are at home vs. at work? Can you give an example?
- Does it affect your SUP use? (Do you use them more or less because of the disposal options)? Can you give an example of a situation where this would be the case?
- Disposal is not the same in all areas (in the home or in public places), does this impact your SUP use?

SUPs and COVID-19

Moving onto COVID-19, I would like to revisit what we discussed in the first interview. *[insert a review of what was talked about]*. After the last interview, do you have any reflections or thoughts that you want to talk about/add?

... In interview 1 we talked a lot about your use of *[add examples]* plastics going up/down. Why is that?

- PROBE:

- Avoiding risk, feelings of safety, government recommendations?

[going off of the probes above] ... what was that like for you to have that [insert specific change]?

- PROBE:

- Do you notice challenges in getting used to *[you changing routines related to the pandemic?]* routines? Any challenges in changing the use of *[relate to the plastics of the practices]* plastics?
- Were they easily changed? Or did they meet resistance? Why?

What is it about the pandemic specifically that caused *[insert specific change]*?

- PROBE:

- Different knowledge?
- Is the practice performed differently because of the pandemic, and why?

How does the pandemic affect the reasoning/decision for you that day? *[have examples from interview #1 or diary entries]*.

Do you notice a difference in how and why you use plastics in your *[add some examples that had social aspects related to them]* throughout the pandemic? (Are practices performed differently?)

- PROBE:
 - Can you give an example?
 - Do they feel different? (i.e., does shopping feel different during COVID?).
-

Policies

I have noticed and experienced that some stores/shops have implemented policies on bringing reusable materials (ex. Bags, cups, etc.) ... how has this affected you and your SUP consumption?

- PROBE:
 - What are your thoughts on these policies?
 - Does it differ in different settings (who you are with, your mood, the store)?

In the first interview I showed a chart with the various COVID policies and numbers. [*explain the various policies*]. How did the above-mentioned practices change with the different policies that come from the provincial government and federal government?

- PROBE:
 - Why? What are your thoughts on these policies? Can you elaborate on this?

How has it impacted your plastic use?

In the same sense as that you might use different plastics/plastics differently with different groups of people or in different social situations (for different reasons, etc. at work, at home with different friend groups), have you noticed different plastic use throughout the pandemic between these settings?

- PROBE:
 - Why is that?
 - How does the impact of the policies change between social groups?
-

Conclusion

Given our discussion today, do you have anything else that you'd like to add?

Finally, do you have any questions?

Thank the participant for their participation in the project.

Contextual Interview Guide

Introduction

- Thanks for speaking with me.
- Short introduction to the project – the purpose, what I’m going to do, why it’s useful to talk to her.
 - o I’m looking at the impact of the COVID-19 pandemic on SUP consumption of Calgarians. Mostly looking at the changes in SUP consumption in daily life, specifically mobility and food. Part of it is looking at use, but also why and how they’re used and the knowledge, meanings and relations that are connected this use.
 - o Of course, part of that is the context in which they’re used. The context being both the daily context of the lives of Calgarians (jobs, routines, family life, etc.) but also the context in which they live their lives, meaning culture and waste and recycling infrastructures, etc. that shape their ability to use (or not to use single-use plastics). Part of this is the discourse and the infrastructure in which the residents of Calgary live their lives. Which is why I wanted to talk to you – to get more information about the strategy (and partly out of personal interest) and also the discourse around the policy and to better understand the City’s understanding of public conception around single-use plastic consumption.
- Ask for consent to record the interview

About the policy

To start, can you tell me a bit about yourself and the position you have at the city?

- PROBE:
 - o Which department?
 - o Job duties, description
 - o Job duties related to the single-use item reduction strategy.

I’d like to talk about the reduction use strategy. I have read the scoping report that was presented to city council last year, but could you talk a bit about the strategy? What are you looking at specifically?

- PROBE:
 - o Purpose of the strategy?
 - o What are the goals of the project?
 - o Timeline? **New timeline?**
 - o If possible to talk about, what types of options they are looking for the strategy →
Policy tools to be used
 - Who will it be mainly aimed at? individuals, businesses, households? All of them?
 - o Where in the municipality (government) does this strategy fit? Is it a part of waste and recycling services? And other departments?
 - o What factors affect what gets to be in the final strategy? Factors such as research, public opinion, by-laws, businesses, etc.

What about the progress of the policy?

- How far along are you?
- What issues are you coming across now? (Federal list that came out, COVID-19)
- *The timeline that was originally suggested said that you will conduct research and engagement (after what was already done), what type of research and engagement does this follow? What does it look like?*

What type of information are you basing your strategy off of?

- PROBE:
 - o The survey, Mayor's expo, consultation with other businesses and seeing what other jurisdictions have done. Does this relate to the local Calgarian context?
 - o What research has been done? Since the scoping report came out last year?

Can you talk a little bit about the impact of COVID-19 pandemic on SUP consumption in Calgary?

- How has it impacted your strategy?
 - o The progress of the strategy?
 - o Will you be working in COVID-19 into the strategy?
- Do you have any knowledge on how SUP use has changed in Calgary since the pandemic has become?
 - o Have you noticed a change ideas or discourse around single-use plastics in Calgary? (From your work position or personally).

Around the policy

Part of my project is also looking closer at the context in which Calgarians consume single-use plastics, so I'm interested in your perception of the 'context' around single-use plastic consumption.

Can we talk a little bit about the Single-use item policy field in Calgary?

- PROBE:
 - o What were/are the motivating factors for this policy? How did the policy become about?
 - o Are you working together with other organisations in the city to implement the policy? *[obviously, as the municipality you have the power to implement by-laws, etc., but it is interesting to see if you know what others are doing as well].*
 - o Are you working with other departments in the municipality or businesses to implement a good policy?
 - o What have you heard from the stakeholders that you are working with? What are their thoughts on single-use item consumption in Calgary?

I would also like to know a bit more about the City's perception of Single-use item consumption in Calgary.

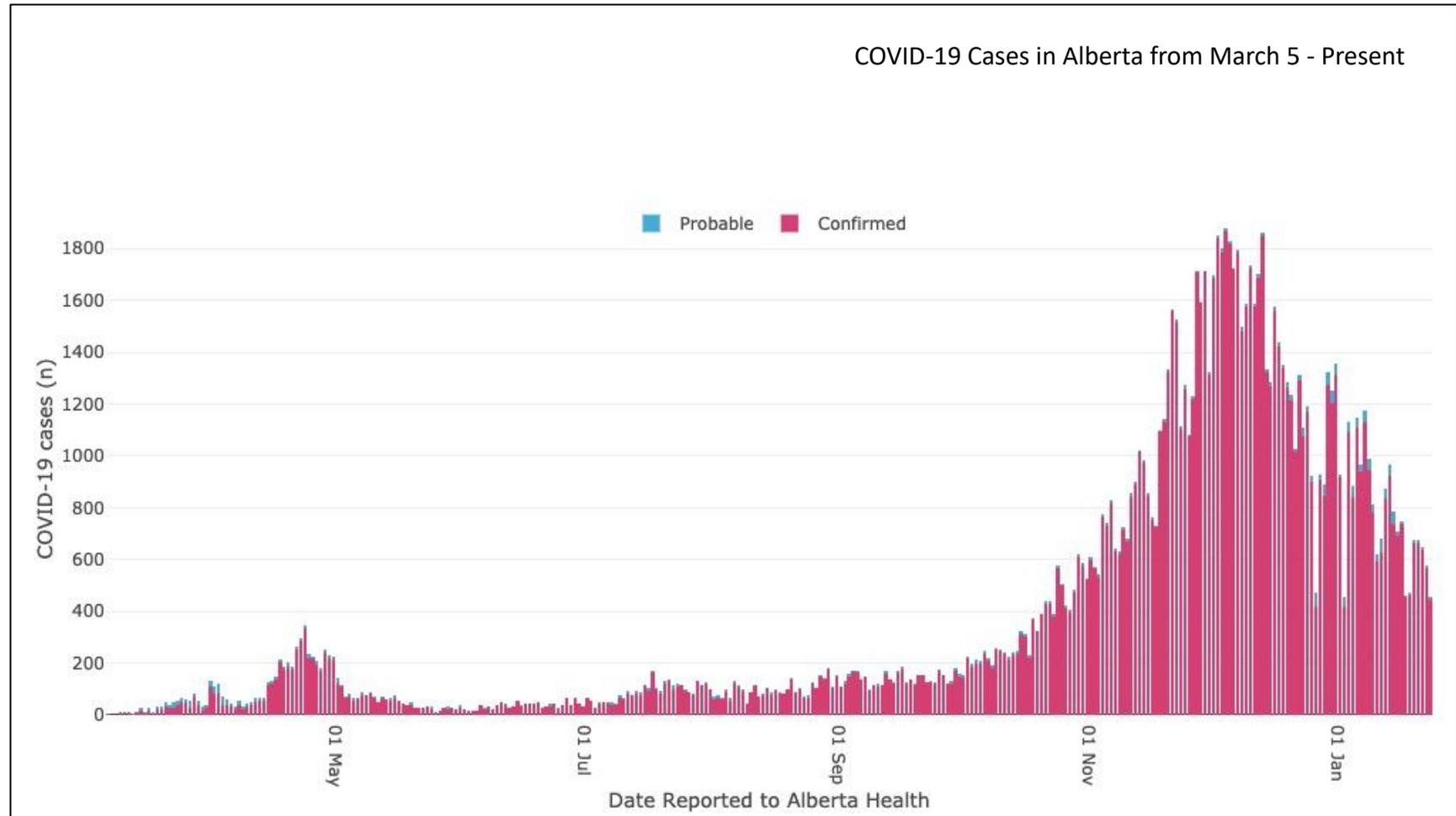
- PROBE:

- What type of research did you do or is included in the strategy? *From what I understand from the presentation, is that the project has collected information from the survey, the mayor's expo, and in combination with a few other local businesses.* But is there some information about single-use plastic usage/consumption that they used in their report to council? (Databases, recycling composition information, etc.). (How did they get the information that there are too many items, for example)
 - How does this fit into the policy? As in, what type of impact does it have on the final product? Is the policy more heavily based on stakeholder issues or the 'numbers'?
- Do you have information about the discourse around single-use plastics in Calgary? Numbers, uses, recycling, context? What general Calgarians think?

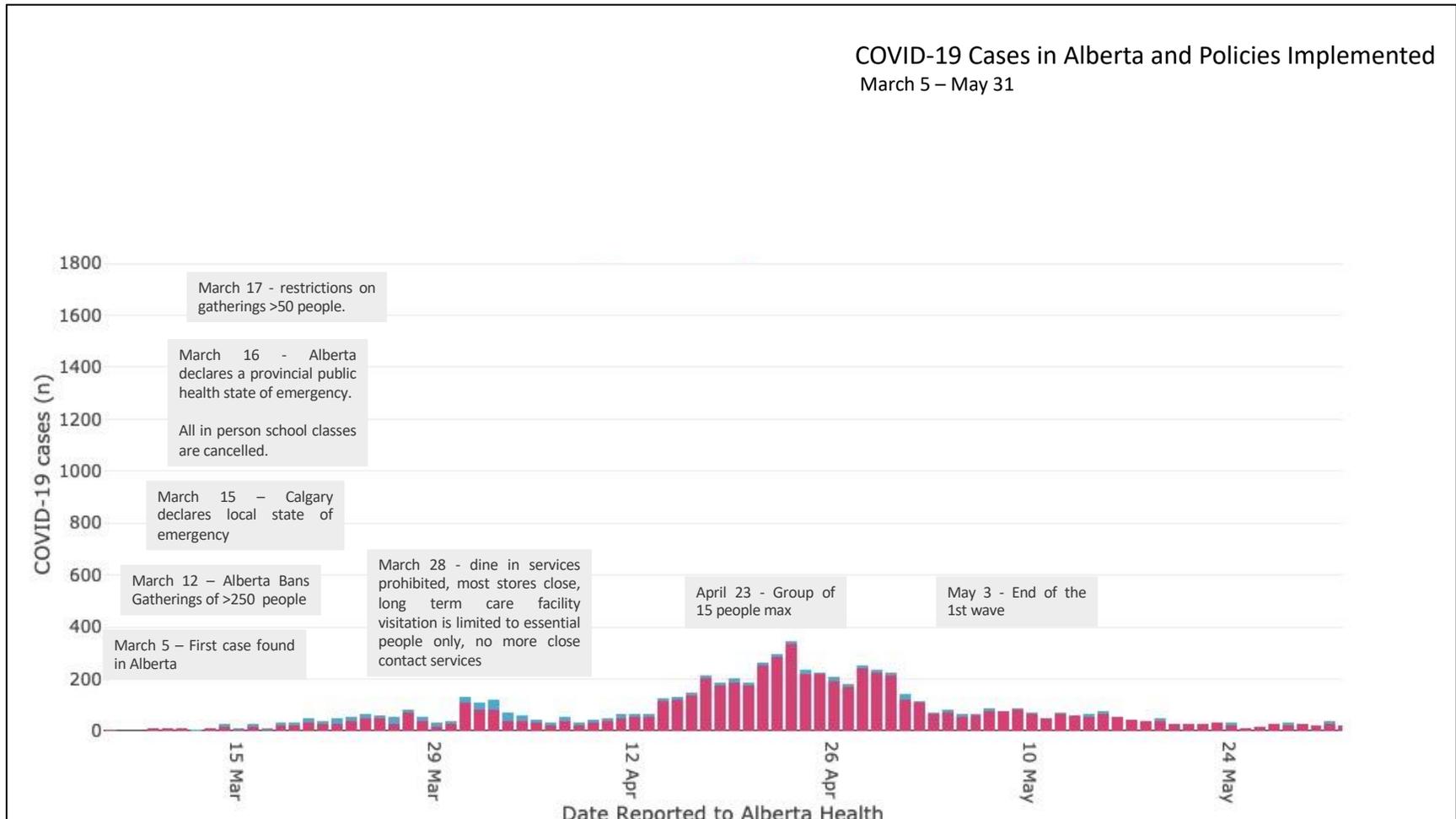
There was talk about the scoping report during the meeting minutes of last year's council meeting – is there public access to the scoping report? (I think it's the information that you found online (5 documents with information)).

COVID-19 Policy Visuals

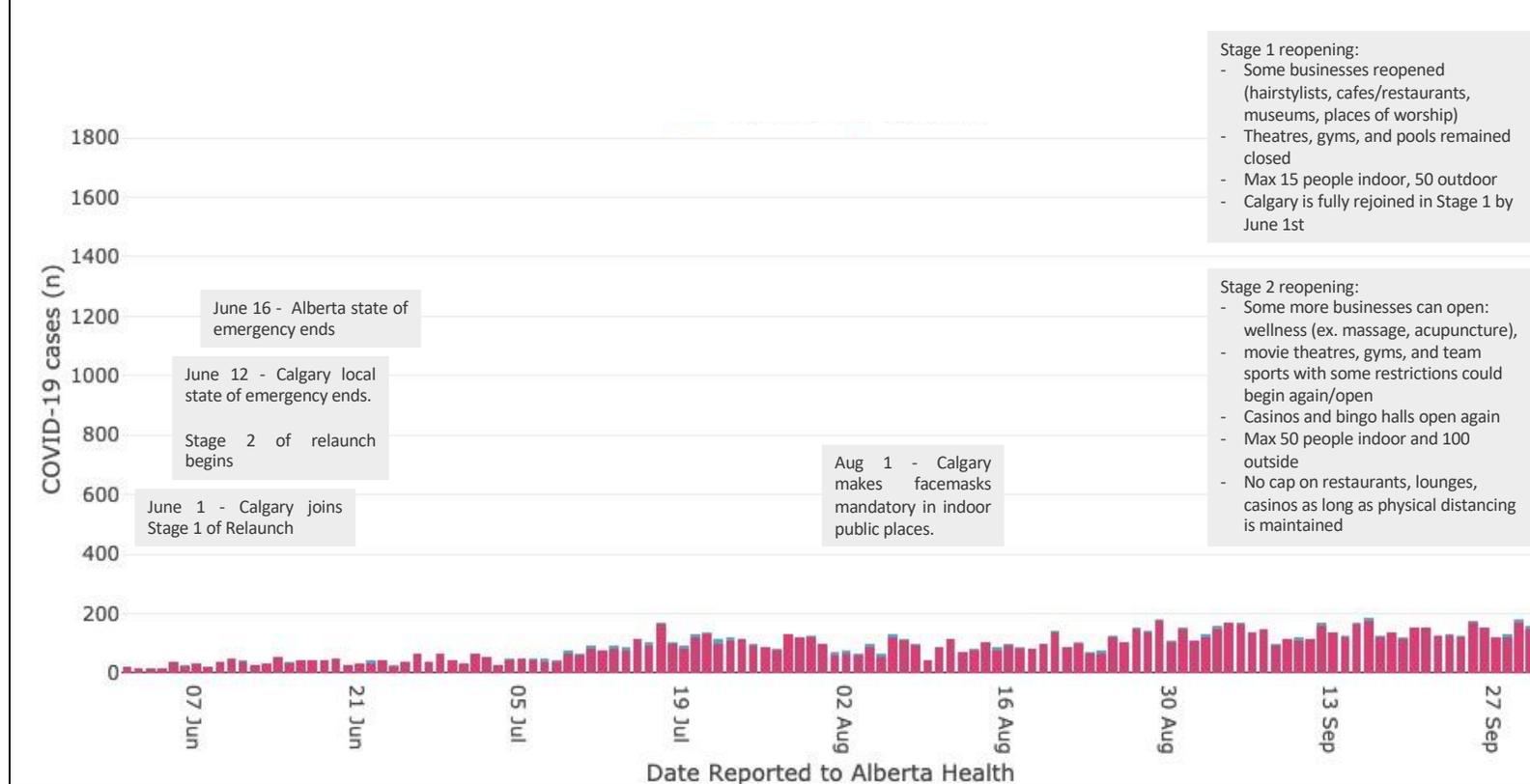
The following slides were shown to participants in the first interview as to refresh their memory on the progression of the COVID-19 pandemic. The first slide is an overview of new daily COVID-19 cases from the beginning March 5, 2020 - January 22, 2021. This slide was taken as a screenshot from Government of Alberta (n.d.-a) on January 24, 2021. Earlier versions of slides similar to these were shown to earlier interviewees, but they were updated as the weeks went along. These are the most recent visuals shown to participants. The following three slides were taken as screenshots from the same source on January 5 and 24, 2021.



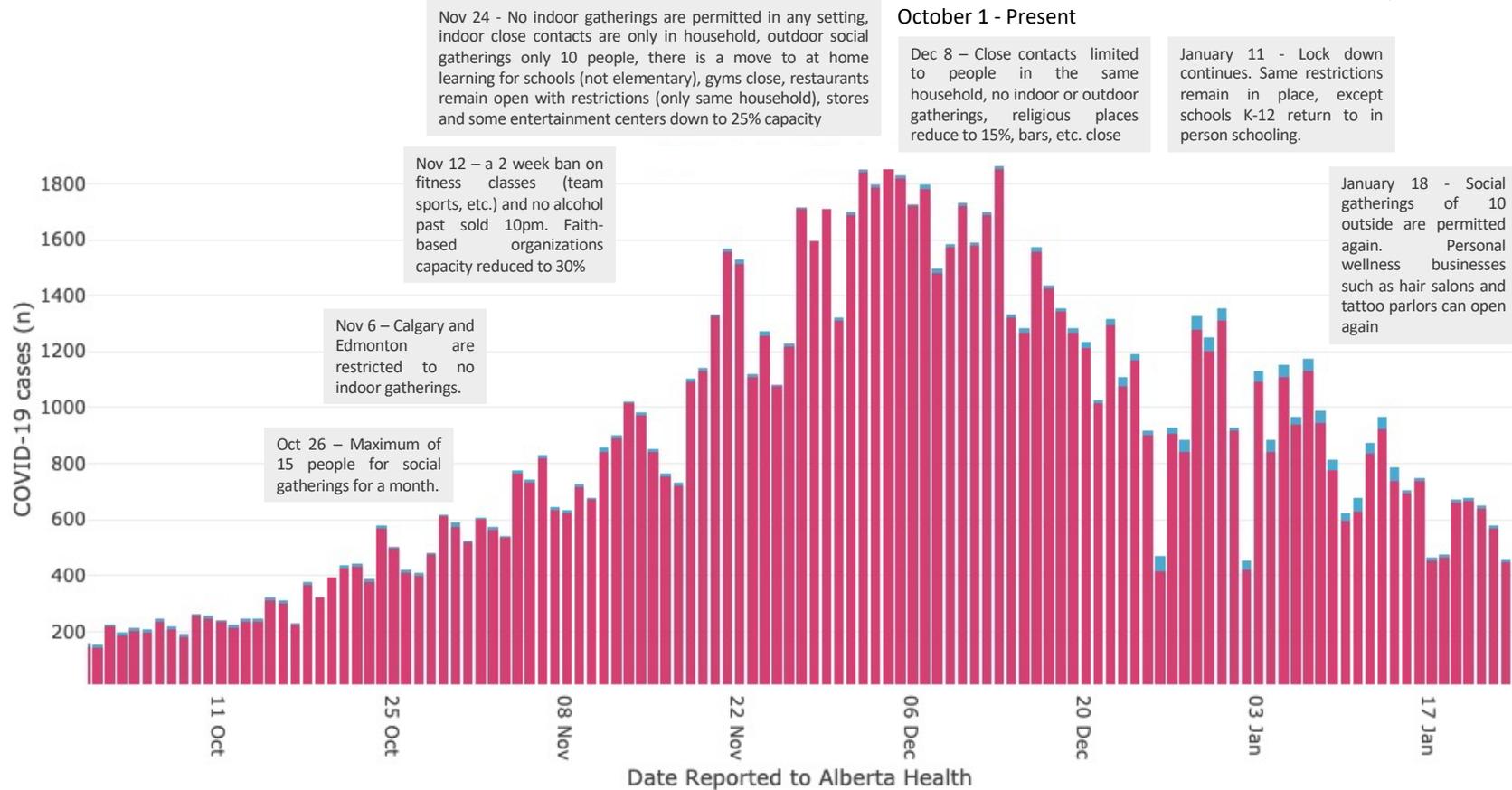
The following three slides split the graph above into three timeframes with relevant COVID-19 policies overlain. The references for these slides are as such for the following dates: Herring (2020) for dates on the timeline ranging from March 5 to 16, May 3, June 12 and June 16, 2020; Government of Albert (n.d.-b) dates March 16 - March 28, 2020; Government of Alberta (2020b) for the Relaunch Strategy on June 1 and 12, 2020 and Stage 1 and 2 of the relaunch strategy; The City of Calgary (2020) for August 1, 2020; Government of Alberta (n.d.-c) for dates October 26 and November 12, 2020 and January 11, 2021; Government of Alberta (n.d.-d) for dates November 24, 2020 and January 18, 2021; and Government of Alberta (n.d.-e) for December 8, 2020.



COVID-19 Cases in Alberta and Policies Implemented June 1 – September 30



COVID-19 Cases in Alberta and Policies Implemented October 1 - Present



Appendix 3: Information Sheet and Consent Form

Invitation to Participate: Studying the Impact of COVID-19 on Single-use Plastic Consumption in Daily Life

Dear potential research participant,

You are invited to participate in my thesis research which is investigating the impact of the COVID-19 pandemic on single-use plastic consumption in the daily life of individuals living in Calgary. In order to make an informed decision about participating in this project, please take the time to read this information sheet carefully.

Project information

While single-use plastics are a staple in everyday life, there is still much unknown about how they fit in the daily life of Calgarians. This project takes a closer look at how, when, where and why single-use plastics are used in daily life, and the impact that the COVID-19 pandemic has/had on this. The larger goal of this project is to investigate this topic in order to help improve the sustainable consumption of single-use plastics.

Who am I?

I am Larissa Dorrestijn, a Master student at Wageningen University and Research, located in the Netherlands. This research is part of the thesis requirement for the Master Environmental Science program.

Why were you chosen?

As single-use plastics are so commonly used, I am looking for a variety of participants who reside in Calgary to help me better understand daily use of single-use plastics. My family and friends have kindly helped me spread the word that I am looking for participants, and since you are reading this information sheet, we likely have a mutual connection through either a family member or friend.

What can you expect as a participant of this project?

If you choose to participate in this project, you are asked to be willing to participate in **2 interviews and 7 days of diary entries**. The process is as follows:

- **Interview 1:** The first interview will take place and serves to get to know you, the participant, while also learning about your daily routines.
- **Diary entries:** After the first interview, participants are asked to complete 7 days of diary entries. These diary entries will focus on the single-use plastics you use daily. Each diary entry can be expected to take about 10-15 minutes to complete.
- **Interview 2:** After the diary entries, participants are asked to come back for a second interview to further discuss their first interview and their diary entries.

Interview topics will be focused on what you *do* every day (e.g. shopping, eating, getting around), while also discussing your single-use plastic use and how COVID-19 has affected your daily routines. These interviews and diary entries will take place from **approximately mid-January until mid-February**. Each interview is expected to take approximately 1-1.5 hours. Due to the

COVID-19 pandemic, the interviews and diary entries will be completed remotely and online; however, I ask that you have access to an email account and a video-calling platform.

Possible risks of participation

This research primarily focuses on your daily life and will not venture into private or difficult topics, so there are limited expected risks to you as a participant. Any information (such as name, occupation, location, etc.) will be kept anonymous following ethical protocol.

Of course, participation in this project is completely voluntary. If you choose to participate and at any point begin to feel uncomfortable, or that the risks are too big to you, you are permitted to withdraw from this project at any time that is best for you. If you choose to withdraw, there will be no penalty or loss to you. Additionally, if you wish, you are welcome to raise your issues with me and I will do my best to find a solution. Lastly, if you choose to participate, you will be asked to complete and sign a consent form.

How will your information be used?

This project is completed under Wageningen University and Research, and thus, follows the ethics standards of the university. All information will be kept confidential, and anonymity will be assured in the final product. Furthermore, your participation in this research will be used in analysis and writing of my thesis project. If you wish to read the finished version of my thesis, that will, of course, be possible.

The Next Step

Your participation in this project will enable the collection of valuable information regarding single-use plastic consumption and will contribute to discovering solutions which work towards sustainable development. Please take the time to consider if you would like to participate in this project. I ask that you contact me before January 11, 2021 if you wish to participate. Upon making the decision to participate, I will continue correspondence with you.

Any questions can be directed to me or my supervisor, Dr. Mary Greene, at the following:

Larissa Dorrestijn

Email: [REDACTED]

WhatsApp*: [REDACTED]

Home phone*: [REDACTED]

Dr. Mary Greene

Email: [REDACTED]

Telephone: [REDACTED]

*as I currently do not have a Canadian phone number, I ask you contact me (if possible) through WhatsApp (call or text) or by calling me on my home phone.

Kind Regards,

Larissa Dorrestijn

Master Student Environmental Science

Wageningen University and Research

The impact of the COVID-19 Pandemic on Everyday Single-use Plastic Consumption of Calgarians.

Participant Consent Form

I, _____, agree to participate in this research study on the impact of COVID-19 on Single-use plastic consumption.

By signing this form, I agree that:

- I am aware that my participation entirely voluntary, that I am able to withdraw at any moment, and that withdrawal will be of no loss to me.
- I have had the project explained to me either in writing or verbally and am aware of what my contribution to this project involves.
- I am aware that the data collected during the interviews and in the diary entries will be used for analysis and may be quoted in the final version of the research.
- I am aware that my participation in interviews will be audio recorded and will be transcribed using otter.ai.
- I am aware that the transcripts, audio recordings, and diary entries will not be read or listened to by anyone other than the researcher (Larissa Dorrestijn), and/or her supervisor (Dr. Mary Greene).
- I am aware that my personal information will be kept confidential and that it will not be traceable back to me in the final project.
- I have had the opportunity to ask any questions that I may have.

Participant Signature

Date

Researcher Signature

Date

Appendix 4: Single-use Plastics

This list is a copy of the list created by Environment and Climate Change Canada (2020). It was directly taken from this source and not adapted in anyway. It provides a basic classification scheme for the single-use plastics in this project:

- Bags, including
 - checkout bags,
 - produce and bulk food barrier bags,
 - garbage bags, and
 - dry cleaning bags
- Packaging not necessary for the protection for food or goods, including:
 - multi-packaging,
 - produce stickers, and
 - some films
- Cosmetic and personal care products and packaging, including
 - cotton swab sticks,
 - flushable wipes, and
 - disposable personal care items
- Plastic packaging used in aquaculture and coastal industries (for example., strapping bands)
- Food packaging, including:
 - beverage bottles and caps,
 - snack food wrappers, and
 - some films
- Food packaging and service ware (for example., takeout containers and lids, plates, bowls and cups) made from problematic plastics, including:
 - foamed plastics,
 - black plastic,
 - polyvinyl chloride (PVC),
 - oxo-degradable plastic, or
 - multiple (composite) materials including one or more plastics
- Coffee pods
- Plastics used in medical applications, including personal protective equipment such as:
 - masks,
 - gowns, and
 - gloves
- Cigarette filters
- Contact lenses and packaging
- Food service ware, including:
 - hot and cold drink cups and lids
 - straws
 - stir sticks
 - cutlery, and
 - condiment portion cups and sachets

Appendix 5: Final Coding Lists

Coding list for Daily Practices Stream

Codes	Description
Main Practices	Practices that are either not in COVID-19 or are not specifically mentioned to be during COVID-19.
Lunch/food storage	Relating to practices of lunch or food storage.
Socializing	Relating to practices of socializing or socializing aspects of practices.
Shopping	Relating to practices of shopping (grocery shopping not included).
Groceries	Relating to practices of grocery shopping.
Mobility	Relating to practices of mobility or elements of mobility in other practices.
Takeout/eating out	Relating to practices of take out: including drive thrus, eating something that was not 'cooked' by someone in the household, restaurant eating, or ordering in.
Work	Practices related to work.
Online Shopping	Relating to practices of online shopping.
Getting Coffee	Relating to practices of getting coffee, drinking coffee, making coffee, or any other hot drink that involved paper coffee cup and plastic lid, etc.
Connections between practices	Signals any connections between two practices
Characteristics of plastic use and the plastic (material) in the practice	
Variable materials	Sometimes the practice includes plastic, but it can also have other materials that are not plastic which perform a similar function.
Trying to be better	Relating to trying to improve SUP use, or general environmental practices.
Challenges	Challenges related to changes in practices or SUP consumption.
Reuse	Elements of reuse of SUPs.

Unaware	Unaware of SUP consumption.
Awareness	Awareness related to the diary entries, and the use of the diary entries in the methodology.
Justification for use	Signals a justification for use, or not, of SUPs.
A treat	Related to when participating in a practice is seen as 'a treat'.
Convenience	Convenience that plastic items bring, but also convenience of taking part of a practice.
Unnecessary	SUPs there were deemed unnecessary.
Purpose	Purpose of SUPs in practices.
Available alternatives	Alternative materials to SUPs.
Difficult to adapt to new material	Adapting to new materials that are not SUPs.
If alternative is forgotten	What happens in an alternative is forgotten.
"Just there"/Unavoidable	Plastics are just part of the practice, not seen as special or anything.
Spontaneity	Spontaneously participating in a practice.
No use	Plastics that were mentioned as not used by participants.
COVID-19 Practices	
COVID	Practices related to COVID-19, and changes in practices in relation to COVID-19.
Mobility	Relating to practices of mobility or elements of mobility in other practices during COVID-19.
Socializing	Relating to practices of socializing, socializing aspects of practices, or changes in socializing.
Groceries	Relating to practices of grocery shopping during COVID-19.
Takeout/eating out	Relating to practices of takeout during COVID-19.
Getting Coffee	Relating to practices of drinking coffee during COVID-19.
Masks	Relating to wearing face masks.
Social Factors	
Feelings	Feelings felt about SUPs, or during participation in a practice.

Normalized	Changes in practices (sometimes due to COVID-19) have become normalized.
Feelings of Safety	Feelings of safety related to COVID-19.
Risk aversion	Risk aversion related to COVID-19.
COVID Fatigue	COVID-19 fatigue, relating to stress, burnout, tiredness, due to the pandemic.
Identity	Personal environmental identity (or lack of).
Household composition	Relating to impacts of household composition on practice participation and performance.
Social norms	Social norms related to SUPs and practices.
Systems of provision	Relating to the provisioning systems of practices and SUPs.
Store Policy	Store policy related to COVID-19.
Traces of policy	Governmental policy related to COVID-19 and impact of these practices.
Disposal	Elements related to disposal of SUPs.

Coding list for Contextual Stream

Codes	Description
Context	Relating to the contextual interview on Single-use Items Strategy at the City of Calgary (municipal government).
Plastic items	Plastic items discussed.
COVID	Relating to COVID-19.
Federal	Federal SUP policy.
Impact of policy	The impact of federal SUP policy.
Calgary	SUP policy in Calgary.
Citizens	Relating to citizen impacts and opinions.
Operations	Relating to operational impacts and abilities.
Business	Relating to business impacts and opinions.
Systems of Provision	Provisional systems of SUPs.
Disposal	Disposal of SUPs.