Consumer Response to Dehumanization of Service Employees: The Role of Political Ideology

Hung Manh Dao

Submitted in accordance with the requirements for the degree of

Doctor of Philosophy

The University of Leeds

Leeds University Business School

Supervisors:

Dr. Aristeidis Theotokis

Professor Joško Brakus

March 2021

Intellectual Property and Publication Statements

The candidate confirms that the work submitted is his/her/their own, except where work which has formed part of jointly authored publications has been included. The contribution of the candidate and the other authors to this work has been explicitly indicated below. The candidate confirms that appropriate credit has been given within the thesis where reference has been made to the work of others.

The work in Chapter 1, Chapter 2, Chapter 3, and Chapter 9 of the thesis has appeared in conference papers as follows:

- Dao, Hung M., Aristeidis Theotokis, and J. Joško Brakus (2020), "Consumer Response to Dehumanization of Frontline Employees: The Role of Political Ideology," *2020 American Marketing Association (AMA) Winter Conference*.

- Dao, Hung M., Aristeidis Theotokis, and J. Joško Brakus (2020), "Consumer Response to Dehumanization of Frontline Employees: The Role of Political Ideology," *2020 Society for Consumer Psychology (SCP) Annual Conference*.

- Dao, Hung M., Aristeidis Theotokis, and J. Joško Brakus (2020), "Consumer Response to Dehumanization of Frontline Employees: The Role of Political Ideology*," 2020 The European Marketing Academy (EMAC) Annual Conference*.

Note: For all publications listed above, I was responsible for contributing ideas, collecting and analyzing data, coordinating the team, and writing a majority of the manuscripts. The contributions of the other authors, Dr. Aristeidis Theotokis and Prof. J. Joško Brakus, were overseeing the big picture, contributing ideas, providing guidance and constructive feedback, and writing and editing some parts of the manuscripts.

This copy has been supplied on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

The right of Hung Manh Dao to be identified as Author of this work has been asserted by Hung Manh Dao in accordance with the Copyright, Designs and Patents Act 1988.

ACKNOWLEDGEMENTS

their valuable advice on being a consumer researcher and how to prepare for a future research career.

Finally, I would like to thank my friends, also my formal colleagues, Vuong Minh Nguyen and Hung Duc Cu, for our friendship and for their invaluable assistance and service that have enabled me to plan, coordinate, and undertake the text-mining study.

ABSTRACT

Managerial wisdom suggests that the more the employees behave like robots the more successful the service will be. From the perspective of service production, it is clear that dehumanization of service employees (i.e., firms asking employees to behave with limited capacity to think, plan, and have goals, and limited capacity to have emotions and feelings) can improve consistency, efficiency, calculability, productivity, and eventually profitability. However, from the consumer perspective, the extant literature is indeterminant on whether the downstream consequences on consumer intention and behaviour are favourable or unfavourable. This research directly addresses this problem. The authors hypothesize that the response is contingent upon the consumers' political ideology, such that dehumanization induces stronger negative responses among liberal consumers, but it also evokes certain positive responses among conservative consumers. Five studies – a large-scale text-mining study, a quasi-experiment, and three randomized experiments – confirm the central argument.

Study 1 examining millions of online comments indicates that liberals are more likely to express a negative online stance against dehumanization than conservatives, while conservatives are more likely to express a supportive online stance on dehumanization than liberals. Studies 2, 3, and 4 provide further experimental evidence supporting that dehumanization of service employees reduces willingness to use the service among liberals while the effect is weaker or insignificant among conservatives. Study 3 also reveals that surface acting mediates the interactive effect on willingness to use the service such that liberals react more negatively towards surface acting induced by dehumanization. In contrast, Study 5 demonstrates the positive aspect of dehumanization such that dehumanization acts as a prominent signal of a prototypical

capitalist firm (i.e., capitalism associations). By activating capitalism associations, dehumanization can increase willingness to pay among conservatives, but not among liberals.

We also show that, when the expectation of service interaction is high (vs. low) during a service encounter, both negative and positive aspects of dehumanization are heightened (vs. weakened). Particularly, Study 4 demonstrates that dehumanization reduces willingness to use the service of independent, family-run firms, especially among liberals, but this is not the case for willingness to use global chains. In contrast, Study 5 reveals that dehumanization increases willingness to pay for a personalized service, especially among conservatives, but this is not the case for willingness to pay for a standardized service. This research offers important managerial and theoretical implications for service management.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

We first discuss the phenomenon of dehumanization of service employees including its prevalence, importance, and urgency. By doing so, we discuss why this topic is managerially relevant and societally significant. Next, we review bodies of literature that are relevant to the topic. We illustrate that the contemporary literature, despite being a prerequisite to laying a theoretical foundation for this research, is still far from offering a comprehensive view of the research area of interest. Third, we provide our overarching research aim and derived research objectives. Based on that, we discuss overall empirical studies and potential research contributions of this research. Finally, we outline the structure of this dissertation.

1.1. The Phenomenon

Fast-food restaurants (e.g., McDonald's) require their employees to stick to the scripts that dictate almost every movement when dealing with customers. Amazon warehouse workers are asked to perform repetitive tasks without a toilet break (Mahdawi 2018), constantly monitored to ensure their working speed meets the robot-like standard, and become a good Amazonian only when they become an Amabot ("Ama-" from Amazon, "-bot" from robot; Kantor and Streitfeld 2015). Many restaurants (e.g., Hooter Inc., Cowgirls Espresso) outrageously sexualize and dehumanize their waitresses to a mindless walking-billboard to tempt customers. We can see this type of service practice – referred to as dehumanization of service employees – in virtually all service firms that are obsessed with efficiency, consistency, productivity, and profitability of service production.

This approach, nevertheless, has started provoking a backlash recently from many news media outlets (e.g., Boyle et al. 2017; Guendelsberger 2019; Leetaru 2019; Mason 2016; Woodcock 2017; Yusuf 2019). Interestingly, thanks to the interactive nature of online news website, we can observe how people react to dehumanization of service employees in practice, and the reactions are strikingly polarized. As found in many comment sections under online news articles about this practice, many readers openly express their response to dehumanization while others express their support for it. For example, under an article about dehumanization of Amazon warehouse employees on Yahoo! News (Guendelsberger 2019) and dehumanization of Ryanair cabin crews on the Mail Online (Boyle et al. 2017), it is very simple to find many comments showing a negative stance on this practice (e.g., Yahoo! News: "*Greed + abuse of technology. Shame on you, Bezo (or bozo?)!*", "*CAPITALISM. Profits over people all the time...*"; Mail Online: "*Slave labour! Disgusting practices!*", "*Bloody capitalist!*") and an equal or even larger number of other comments showing a supporting stance on this practice (Yahoo! News: "*It's called a job for a reason*", "*Quit, or quit crying!*", "*Love Amazon, please just keep doing what they ask you to do.*", Mail Online: "*So get another job ...*", "*Why in this country do we so hate success that we have to criticise every aspect of a successful business.*"). If the difference in consumer reactions towards dehumanization of service employees is systematic, it urges a thorough examination of this common practice, which then can provide important managerial insight for service firms that use (or plan to use) this practice.

Alongside its importance for business, understanding how people perceive and react to dehumanization of service employees is also societally significant. Note that the recent media attention does not imply that dehumanization of service employees has only become operational lately. In fact, since the Industrial Revolution, human workers

have always been at risk of being transformed into human robots or being replaced by robots (Belk 2016); and this topic has always attracted great interest from sociologists ever since (e.g., Blauner 1964; Marx 1844; Ritzer 1983; Thompson 1983; Weber 1930). Two of the most influential sociologists of the 20th century, Karl Marx and Max Weber, even argue that the dehumanization of workers, and marketplace dehumanization in general, is an unremovable part of a capitalist system. Following their works, dehumanization and its peculiar relationship with capitalism seemed to continually capture the attention of academics, exemplified by the usages of the terms "dehumanization" and "capitalist system" in academic works after 1950. We found that a strikingly similar trend between the two words emerged after 1950 when using Google Books Ngram Viewer (2021) – an online search engine that calculates and charts the frequency of word strings that appear in books within a particular period – to chart their appearances in academic writing. If marketplace dehumanization is always intertwined with the most predominant political and economic system in the world, an investigation of whether individuals fight back or embrace this practice is obviously needed to direct society in moving forward.
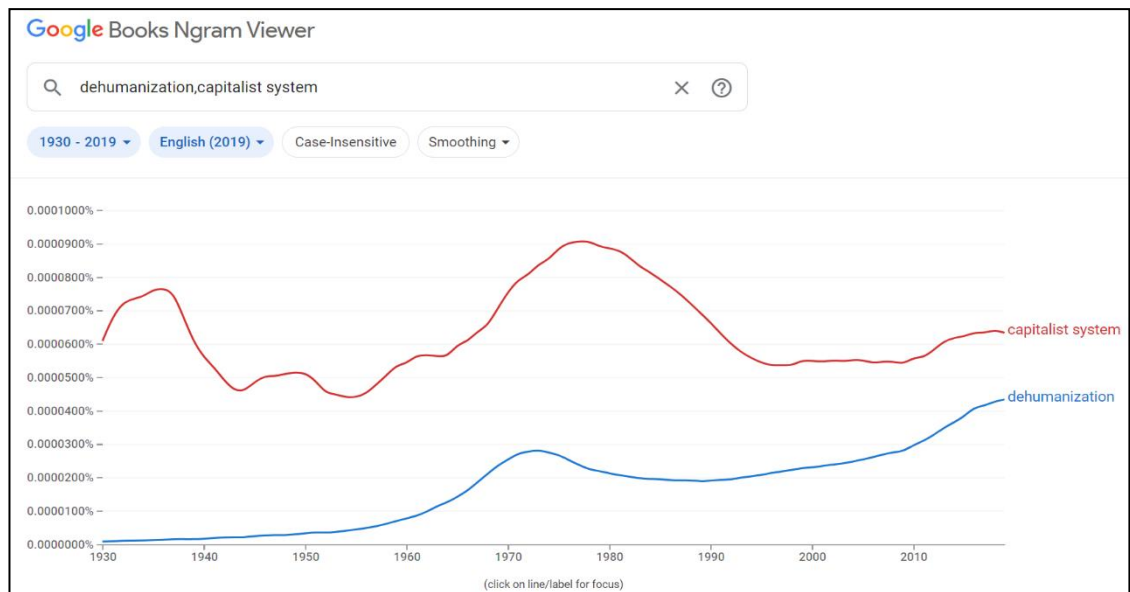
Figure 1. *The Usages of "dehumanization" and "capitalist system" in Books Written in English from 1930 to 2010 (Google Books Ngram Viewer 2021)*

1.2.   Theoretical Problems

Despite its importance, prevalence, and long-standing existence, recent empirical studies have just only started to document the roles of marketplace dehumanization and demonstrate its negative impacts in marketplace contexts (Castelo et al. 2019; Henkel et al. 2018; Herak et al. 2020; Hill et al. 2016). For example, Henkel et al. (2018) show that consumers with a price-conscious mentality (i.e., emphasize having low prices) are more likely to dehumanize service employees. Dehumanization then drives consumers to impose a harsher punishment on the employees when they receive an unsatisfactory service. Similarly, when dehumanizing a person who is paired with an object in an ad, people tend to have more negative attitudes towards the person and the ad (Herak et al. 2020). However, as far as we are aware, no study to date has directly examined a service firm's dehumanization of its employees.

It is noteworthy that the findings of the effects of dehumanization in other contexts are generally in line with the above findings in the marketplace. For example, in more general social interactions, previous studies show that dehumanization can lead to various detrimental consequences including increasing anti-social behaviours (e.g., Leidner et al. 2013; Rudman and Mescher 2012; Viki et al. 2013; Waytz and Epley 2012), decreasing prosocial behaviours (e.g., Andrighetto et al. 2014; Cuddy et al. 2007; Terskova and Agadullina 2019; Vaes et al. 2003), and raising psychological costs (Bastian and Haslam 2011). In organizational contexts, recent investigations reveal that employees in various industries also feel dehumanized in many situations and such feeling leads to various negative effects (Bell and Khoury 2016; Caesens et al. 2019; Caesens et al. 2017; Väyrynen and Laari-Salmela 2018). However, like studies on marketplace dehumanization, the dehumanization studies across various disciplines focus on its effects on the dehumanizers (who dehumanize) and the dehumanized (who is dehumanized) but again entirely neglect the influence of dehumanization (e.g., a service firm dehumanizes its employees) on third-party observers (e.g., customers).

One would suggest that consumers might perceive dehumanization of service employees as an adverse phenomenon and exert negative reactions accordingly. However, this notion has not yet been empirically examined. Furthermore, some studies show that dehumanization is sometimes a defensive mechanism or a psychological tool in certain contexts (Cameron et al. 2016; Lammers and Stapel 2011; Vaes and Muratore 2013), suggesting the complexity of its effects beyond its harmful consequences. Similarly, dehumanization in the marketplace clearly has some practical values for service firms (e.g., boost efficiency, consistency and productivity), and presumably for consumers also. Given the success of many service firms (e.g., Amazon, Ryanair, McDonald's) which rely heavily on dehumanization of their employees to improve

service consistency, we expect some levels of consumer acceptance for this practice. Thus, important questions from both a managerial and theoretical perspective ask when and why consumers like or dislike dehumanization of service employees.

The explosion of dehumanization studies across disciplines recently is, in part, thanks to the modern theories of dehumanization (Haslam and Loughnan 2014; Haslam and Stratemeyer 2016), such as the dual model of dehumanization (Haslam 2006), and the mind perception approach to dehumanization (Gray et al. 2007; Waytz et al. 2010b). The earlier research on dehumanization only conceptualizes dehumanization within its extreme form that can only emerge in extreme conflicts (e.g., Kelman 1973; Opotow 1990; Staub 1989), while the modern theories incorporate its subtler forms – by attributing *less* human qualities to others – that can emerge from daily social interactions and which are extremely widespread (Bastian et al. 2011; Haslam 2006; Leyens et al. 2001). For instance, by default, individuals tend to attribute less human qualities to out-group members and more to themselves and their in-group members (Haslam et al. 2005; Leyens et al. 2001). In a similar vein, this research is also based on the contemporary theories of dehumanization. Particularly, we adopt primarily the mind perception approach to dehumanization to define the dehumanization of service employees as the service practice in which employees are instructed by their firm to behave during service interactions with a limited capacity to think, plan, and have goals and a limited capacity to have emotions and feelings.

Based on practical examples and previous empirical findings, we predict that different types of consumers might react differently towards dehumanization. As discussed previously, not only has dehumanization been thoroughly studied from the psychological perspective, but (marketplace) dehumanization has also been securitized by sociologists and philosophers since the Industrial Revolution. Despite being based on

distinctive and some conflicting philosophical positions, especially between Marxist and Weberian philosophy, these thinkers have come to an agreement that dehumanization of employees is strongly associated with the capitalist system. Therefore, it is reasonable to expect that political ideology – that is, a "set of beliefs about the proper order of society and how it can be achieved" (Erikson and Tedin 2003, p.64) – should play an important role in shaping consumers' responses to dehumanization of employees.

Notably, an emerging body of literature on consumers' political ideology also shows that liberals and conservatives react in a different way to various marketplace stimuli such as information about firms and products (Ordabayeva and Fernandes 2018; Winterich et al. 2012), ad framing (Kidwell et al. 2013; Kim et al. 2018; Septianto et al. 2019), product labelling (Irmak et al. 2020), and product and brand designs (Angle et al. 2017; Ordabayeva and Fernandes 2018). However, while the literature seems to support our initiation prediction about the ideological difference in response to dehumanization of service employees, the previous studies about political ideology overlook its role in service contexts. Thus, investigating the relationship between dehumanization of service employees and political ideology can also enrich the political ideology literature in addition to the dehumanization literature.

1.3. Research Aim and Objectives

As we have just discussed, a service practice in which a service firm asks its employees to behave like robots is commonplace in practice and people seem to have largely different reactions to it. However, the extant literature on (marketplace) dehumanization remains indeterminant regarding how consumers react to this

phenomenon. Furthermore, because dehumanization of employees is closely connected to capitalism, we expect political ideology to have an influence on consumer reactions. Therefore, the general aim of this research is *to examine consumer reactions towards dehumanization of service employees and how political ideology can shape these reactions*. To this end, this research has the following objectives:

- Incorporating psychology, sociology, and consumer literature to enrich the understanding of marketplace dehumanization

- Examine the role of political ideology in moderating consumer reactions towards dehumanization of service employees

- Investigate the process that underlines the consumer reactions by combining marketplace dehumanization and political ideology literature

- Identify other situations in which the negative (positive) effects of dehumanization of service employees can be weakened or amplified

1.4.   Overview of the Empirical Studies

To achieve the research aim and objectives, we conduct five studies comprising a large-scale text-mining study, a quasi-experiment, and three randomized experiments. In the text-mining study (Study 1), we collect more than 10 million online comments and use a combination of text mining and analysis techniques, namely manual coding and machine-learning supervised algorithm, to analyze the unstructured data. The study establishes the link between political ideology and dehumanization across different service settings (front-line, back-end) and different countries (United Kingdom, United States). Thus, this study gives great external validity to our findings. Additionally, the following experiments provide further causal evidence, achieving internal validity. In

8

Study 2, we vary political ideology using a non-randomizing method (i.e., identify two groups of participants regarding their political ideology before the main study) and show that liberals are less likely to select the dehumanization (vs. non-dehumanization) option than conservatives. In Study 3, we manipulate dehumanization and demonstrate that liberals are less likely to use the services of a dehumanizing firm and that surface acting mediates the effect. Study 4 replicates the main interactive effect using a subtle manipulation of dehumanization in another service setting. This study also demonstrates that the negative effect of dehumanization on willingness to use a service is also contingent upon whether consumers expect high (e.g., independent, family-run firms) or low (e.g., global chains) human interactions during service encounters.

Study 5 focuses on the positive aspect of dehumanization and reveals that, because dehumanization signifies a prototypical capitalist enterprise stereotyped with great monetary values (i.e., capitalism associations), conservatives (vs. liberals) are more willing to pay higher for dehumanizing service. Furthermore, this study shows that, when the service encounters highly involve human interactions (i.e., service personalization), the effect of dehumanization on willingness to pay is also amplified. Finally, we strengthen the internal validity by eliminating the concern about the overlap between service standardization and dehumanization in producing the proposed effects.

1.5.   Research Contributions

This research attempts to make several potential contributions to theory and methodology. Theoretically, we aim to extend dehumanization and political ideology literature substantially. Methodologically, we endeavour to offer a novel way to capture

political ideology using unstructured data. We provide an overview of the contributions of this research in the following sections.

1.5.1. Theoretical Contributions

We aim to make a major contribution to the emerging research on marketplace dehumanization (Castelo et al. 2019; Henkel et al. 2018; Herak et al. 2020; Hill et al. 2016). First, while previous research focuses on the dehumanizing perceptions of consumers relating to other marketplace actors including other consumers (Castelo et al. 2019), service employees (Henkel et al. 2018), and an ad actor/actress (Herak et al. 2020), we focus on a service firm's dehumanization of its employees. Particularly, our research aims to shed light on how consumers, as a third party, react to this service practice. We attempt to deepen the understanding of dehumanization even more by going beyond the main effect of dehumanization and introducing important moderators (i.e., political ideology, firm types, service personalization), thereby further deepening the understanding of this topic. Additionally, as current empirical findings and theoretical (and philosophical) arguments across different disciplines (psychology, marketing, management, sociology) show the negative consequences of dehumanization (e.g., Bell and Khoury 2016; Caesens et al. 2017; Henkel et al. 2018; Herak et al. 2020; Marx 1844; Weber 1930; for a comprehensive review in psychology see Haslam and Loughnan 2014, Haslam and Stratemeyer 2016), it is presupposed that consumers are more likely to react negatively towards dehumanization of service employees. Our research aims to empirically test this prediction using experimental data and large-scale unstructured data. Moreover, we also predict that the dehumanization of service

employees might have a functional aspect as it is strongly associated with the capitalist system. Therefore, we can offer a balanced overview of this widespread practice.

Our research also aims to extend the current understanding of consumers' political ideology (for a comprehensive review see Jung and Mittal 2020). While previous research highlights its role in shaping consumer responses to different types of firm stimuli such as product and firm information (Ordabayeva and Fernandes 2018; Winterich et al. 2012), our research draws attention to its role in service interactions. By situating our research in service marketing, we also aim to offer interesting underlying mechanisms which differ in effects across the political ideology spectrum, thereby significantly extending the emerging body of political ideology literature.

1.5.2. Methodological Contributions

During the exploratory process, we found a great deal of diversity in online reactions under news articles about the dehumanization of employees in various service firms (e.g., Boyle et al. 2017; Guendelsberger 2019; Mason 2016; Yusuf 2019). Thus, we aim to conduct a text-mining study in which political ideology will be operationalized using large-scale unstructured data, namely online comments. Particularly, people tend to express their opinions strongly when commenting on articles about political issues or personalities (e.g., Donald Trump, Boris Johnson, Republican). We found that many people have more than hundreds of political-related comments in their comment histories (Boyle et al. 2017; Guendelsberger 2019). Therefore, we plan to collect and classify political-related comments using supervised machine-learning algorithms, and in turn, classify the readers using those labelled comments. Thus, our research can also offer a novel way to measure political ideology,

and thereby contribute significantly to the methodology as the measurement of political ideology heretofore has been involved with only structured data comprising mostly self-report survey and sometimes secondary data (e.g., Han et al. 2019; Irmak et al. 2020; Jung et al. 2017a; Kim et al. 2018; Ordabayeva and Fernandes 2018).

1.6.   Structure of the Dissertation

As shown in Table 1, this dissertation first starts with an introduction. Second, we provide the theoretical background of this research comprising different bodies of literature related to the psychology of dehumanization, sociology of dehumanization (and capitalism), and political ideology literature. By doing so, we also highlight important problems and gaps in the literature that we endeavour to address in this research. Third, we propose and theoretically argue for our hypotheses. Fourth, we present the philosophical foundation and methodological approaches (i.e., large-scale text mining and experiments) of this research. Five, we provide an overview of the whole study before discussing each individual study in detail in the next five chapters. Six, we conclude the dissertation by summarizing the findings of all studies, offering theoretical contributions, methodological conditions, and practical implications. Finally, we discuss the limitations of this research while suggesting the potential area for future research.

Table 1. *Structure of the Dissertation*

Chapter	Synopsis
Chapter 1: Introduction	Discuss the phenomenon and theoretical problems, thereby explaining the importance of the research.
	State research aims and objectives, and propose the potential research contributions.
	Present how this dissertation is structured.
Chapter 2: Theoretical Background	Review the psychology of dehumanization, sociology of dehumanization under the capitalist system, and political ideology literature.
	Discuss gaps in the literature.
	Lay out the theoretical foundation of this research.
Chapter 3: Hypotheses Development	Propose the interaction between political ideology and dehumanization, the mechanisms operating this effect, and other important moderators.
Chapter 4: Methodology	Discuss the philosophical position of this research.
	Discuss key methodologies applied including text mining and experimental designs and overview of the data collection strategy.
Chapter 5: Overview of Studies	Discuss the general aim and basic design of the empirical studies and how the studies join together to comprehensively examine the proposed hypotheses.
Chapters 6-10: Empirical Studies (Studies 1-5)	Present the empirical studies of this research in detail including their aims, sample, procedures, stimuli, measures, results and analyses, and discussions.
Chapter 11: Conclusion	Provide a general discussion, theoretical contributions, methodological contributions, and practical implications.
	Acknowledge the limitations of this research and offer an avenue for future research.

2. THEORETICAL BACKGROUND

In this chapter, we review the literature relevant to this dissertation. The theoretical background comprises two main parts, specifically the literature about dehumanization (section 2.1 to section 2.4) and the literature about political ideology (section 2.5 to section 2.6). In the first part, we discuss the contemporary theories of dehumanization from the psychological perspective before concluding with a critical evaluation of those theories. Additionally, we review the sociological approaches to dehumanization, especially marketplace dehumanization and its long-standing association with capitalism. We then discuss how dehumanization manifests in the marketplace and especially the dehumanization of service employees – the main object of this dissertation. We conclude the first part with a discussion of the consequences of dehumanization demonstrated in the extant literature and the important gaps which we endeavour to fill. In the second part, we discuss the relevant literature about political ideology including an overview of this concept, the consumer research about political ideology, and important gaps that should be closed. Finally, we discuss the differences between conservatives and liberals in cognitive processing styles and prioritization of personal values. In so doing, we lay a theoretical rationale for our hypotheses.

2.1. Psychological Theories of Dehumanization

A systematic investigation of dehumanization can be found in the 1970s when Kelman (1973) tried to understand how moral constraint fails to stop people from committing extreme violence. Shortly after, psychologists started documenting dehumanization as a prerequisite or justification for violence (e.g., Bandura 1999;

14

Opotow 1990; Staub 1989). Overall, early research treats dehumanization as an extreme, explicit, and absolute phenomenon and one which can only be found in extreme conflicts such as wars and massacres (Haslam and Loughnan 2014). However, the contemporary theories of dehumanization have advanced significantly, and researchers have shifted their focus to more relative, subtler, and implicit forms of dehumanization which can manifest in everyday interactions (but see Bruneau et al. 2018a; Bruneau et al. 2018b; Kteily and Bruneau 2017a; Kteily et al. 2015; Kteily and Bruneau 2017b). Similarly, we also focus on the subtle and relative forms and ground this research on the modern theories of dehumanization (but also unified with a sociological approach to dehumanization, see section 2.2). Therefore, we first review four predominant theories of dehumanization before providing our critical evaluations of those theories.

2.1.1. Infrahumanization Theory

Leyens et al.'s (2001) infrahumanization theory starts the theories of dehumanization in an important way that revitalizes the concept. Infrahumanization theory is grounded on psychological essentialism suggesting that people tend to attribute their in-groups with "essences" which can be used to define the very nature of the group. The essences can be used to consolidate the group coherence and differentiate the in-group from out-groups. In this line, infrahumanization theory suggests that ascriptions of uniquely human emotions are an important element of "human essence" which people are more willing to attribute to their group but not to others (Demoulin et al. 2004; Leyens et al. 2000). The theory suggests that secondary emotions (e.g., pride, nostalgia, compassion, shame, guilt, and embarrassment) but not

primary emotions (e.g., disgust, fear, joy) constitute the uniqueness of human emotions. This is because secondary emotions embody morality and cognition and emerge from human interactions whereas primary emotions are biologically inherent and shared with non-human species (Demoulin et al. 2004; Epstein 1984). Infrahumanization theory further suggests that people tend to *infrahumanize* –or dehumanize in a relative, subtle form – out-group members by attributing fewer secondary emotions to them.

Infrahumanization theory advances the dehumanization literature in two important ways. First, because secondary emotions comprise both negative emotions (e.g., shame, guilt) and positive emotions (e.g., compassion, pride, love), infra-dehumanization can emerge independently of out-group dislike. Second, different from the earlier theories of dehumanization, infrahumanization theory proposes that dehumanization can occur in a subtler form in everyday social interactions, and conflicts are not a prerequisite for dehumanizing out-group members (Leyens et al. 2007). This is reflected in the term "infra-humanization" (Haslam and Loughnan 2014). Nevertheless, the terms "infrahumanization" and "dehumanization" have been used interchangeably in dehumanization literature (e.g., Čehajić et al. 2009; Cuddy et al. 2007; Miranda et al. 2014).

2.1.2. *Haslam's Dual Model of Dehumanization*

Unlike infrahumanization theory, which is based primarily on the human essence, that is, a set of secondary human emotions, the dual model of dehumanization developed by Haslam (2006) suggests that the comprehensive view on dehumanization requires a comprehensive conceptualization of humanness. Haslam et al. (2005) provide empirical evidence supporting two distinct senses of humanness, referring to human

uniqueness and human nature. Uniquely human traits such as refinement, rationality, and moral sensibility separate us from other animals, while human nature traits such as emotional responsiveness, individuality, and interpersonal warmth separate us from objects such as robots and machines. People also perceive that the uniquely human traits are less commonplace, culturally dependent, unrelated to emotionality, developed through socialization and later in life, while the human nature traits are commonplace, universal, related to emotionality, developed early in life, deeply rooted, and biologically based (Haslam et al. 2005; Haslam et al. 2004). Accordingly, dehumanization can take two forms as people can deny either sense of humanness (Haslam et al. 2005). Animalistic dehumanization emerges when one is seen as lacking refinement, self-control, and intelligence (i.e., a denial of uniquely human traits), and likened to an animal. Mechanic dehumanization emerges when one is seen as lacking emotionality, warmth, and individuality, and likened to a machine.

As Haslam's dual model of dehumanization can capture various forms of dehumanization such as subtle or blatant, implicit, or explicit forms of dehumanization, it extends the infrahumanization theory by incorporating it with earlier theories of dehumanization. Moreover, the model adds a mechanic dimension of dehumanization alongside the animalistic dimension which is mostly correspondent with the denial of secondary emotions in the infrahumanization theory.

2.1.3. Mind Perception Theory

From a completely different research paradigm, the mind perception theory of Gray et al. (2007) provides another conceptualization of the dehumanization concept. Factor analysis reveals that people perceive the minds of different entities (including

human and non-human) alongside two dimensions, namely experience – that is, a mental capacity to feel emotions such as pain, pleasure, pride, and embarrassment – and agency – that is, a mental capacity to plan, think, and self-control. Specifically, people perceive the minds of adult humans and the self as high in both agency and experience. In contrast, they perceive animals' minds as high in experience but low in agency, while perceiving a social robot and a dead person as low in experience but moderate in agency. Accordingly, people can dehumanize (or dementalize) others by stripping away their mental capacities (Waytz et al. 2010b).

Interestingly, despite belonging to different research paradigms, Haslam's (2006) dual model and Gray et al.'s (2007) mind perception arrive at a consensus that whatever constitutes human can be represented in two dimensions, namely agency (corresponding to human uniqueness) and experience (corresponding to human nature), and, consequently, dehumanization emerges when either dimension or both dimensions are denied. Therefore, researchers who study dehumanization tend to use approaches interchangeably when conceptualizing and operationalizing dehumanization (e.g., Heflick et al. 2011; Henkel et al. 2018; Schroeder and Epley 2016; Waytz and Epley 2012).

Although the two approaches share important similarities, the mind perception has important conceptual leverage compared to the dual model, such that the former's theoretical focus on all entities enables us to view dehumanization as a part of the mind attribution process rather than as an isolated process (Waytz et al. 2010a). Particularly, along the mind perception continuum, on the one hand, over-allocation of mind to non-human entities (e.g., robots, animals) leads to anthropomorphism or humanization; on the other hand, under-allocation of mind to humans leads to dehumanization. Therefore, dehumanization literature and anthropomorphism/humanization literature can be unified

under a broader paradigm (i.e., mind perceptions), and thus inherit and expand each other (Waytz et al. 2010a). For instance, Schroeder and Epley (2016) are able to show that humanizing speech can convey the mental capacities of any entities using the mind perception approach and the interrelationship of dehumanization and anthropomorphism. This advantage might be particularly useful in consumer research as product and brand anthropomorphism and humanization is an important area of this research (MacInnis and Folkes 2017). For instance, the recent findings of Herak et al. (2020) show that people automatically anthropomorphize an object and in turn judge it more favourably when it is paired with a human (vs. only an object) in ads. In contrast, people dehumanize a person when the person is paired with an object (vs. a human only) in ads and in turn judge him/her less favourably.

2.1.4. The Model of Stereotype Content Account

From the neuroscience perspective, Harris and Fiske (2006) propose an interesting approach to dehumanization. They view dehumanization as a failure to activate a particular area in the brain network, namely the medial prefrontal cortex (mPFC), which has been shown to be activated whenever a person is thinking about human(s) (self and others). This approach is based on the stereotype content model (Fiske et al. 2002), which suggests that people form an impression of other groups and individuals along two dimensions, namely warmth and competence. Thus, there are four main groups based on the combination of these two dimensions: high warmth-high competence (e.g., in-groups), high warmth-low competence (e.g., elderly people, disabled people), low warmth-high competence (e.g., rich people), and low warmth-low competence (e.g., homeless people, drug addicts). Harris and Fiske (2006) show that a low-low group is

easily dehumanized by others, evidenced by the failure to active mPFC when people see such a group.

This account offers a fascinating angle to conceptualize dehumanization and provides evidence beyond self-report data. Nevertheless, it is challenging for researchers to adopt this approach when studying dehumanization in other contexts due to technical constraints. Another important contribution of this model is that it indirectly provides evidence supporting the distinction between what constitutes (de)humanization including agency (or human uniqueness) and experience (or human nature) and what constitutes social cognition, comprising warmth and competence (Fiske et al. 2007). As such, to engage in social cognition, considering others as human beings is a pre-condition. Later research also provides further empirical evidence for the differences between the dimensions of humanness and that of social cognition (e.g., Jones-Lumby and Haslam 2005; Martínez et al. 2017).

2.1.5. Critical Evaluations of Theoretical Approaches to Dehumanization

The four contemporary theories reviewed above have advanced the literature of dehumanization considerably and have been used as theoretical groundworks for most later dehumanization studies (see Table 2 in section 2.4 for example). Similarly, to define dehumanization of service employees, we also adopt the well-accepted bi-dimensional approach to dehumanization, which suggests that people can dehumanize others by denying their capacities of thinking, planning, and having goals (agency or human uniqueness) and/or denying their capacities of feeling and having emotions (experience or human nature). Particularly, we define dehumanization of service

employees as the service practice in which employees are instructed by their firm to behave during service interactions with a limited capacity to think, plan, and have goals and a limited capacity to have emotions and feelings. Generally, the two forms of dehumanization can emerge independently, which is empirically supported and theoretically argued (e.g., Bain et al. 2009; Demoulin et al. 2004; Gray et al. 2007; Haslam et al. 2005; Haslam and Loughnan 2014; Jack et al. 2013). Nevertheless, in many cases, previous studies show that people tend to dehumanize others by denying both uniquely human and human nature traits altogether (e.g., Bastian et al. 2014; Henkel et al. 2018).

Furthermore, while we agree with the notion of two senses of humanness, the metaphoric comparisons between human and animals, and especially between human and robots, might not always be aligned with the lay concept of dehumanization. While robots and objects are clearly lacking experience (i.e., human nature), they are in most cases also lacking agency (i.e., uniquely human traits), possibly except for advanced artificial intelligence. Robots can only execute and follow pre-defined scripts programmed into them; and thus they cannot possibly possess a capacity for thinking and planning on their own. This notion is aligned with a sociological and philosophical perspective on dehumanization which links workers and employees to robots by denying both agency and experience (Marx 1844; Ritzer 1983; Weber 1930). Importantly, this also seems to resonate with the lay concept of humanity and dehumanization. In the study of mind perception, people report social robots, which are already anthropomorphized and display some physical human attributes, as lower in both agency and experience than adult humans (Gray et al. 2007). Therefore, we argue that, when laypeople (e.g., consumers) use a metaphoric comparison between human and robots (e.g., "a firm asks its employees to behave like robots, "I feel I am being

treated like a robot", "I feel the employee is being treated like a robot"), they refer to the denial of both agency and experience. Note that, for the sake of convenience, we still refer to the denial of agency as an animalistic form of dehumanization and the denial of experience as a mechanistic form of dehumanization in the following discussions. To solidify the theoretical foundation of this research and elaborate on this subject, in the next section, we review the sociological perspective of dehumanization of employees.

2.2.   Sociological Perspective on Dehumanization: The Relationship between Dehumanization and Capitalism

Whereas dehumanization is an emerging stream of psychology-based research (Haslam and Stratemeyer 2016), the concept of dehumanization has been explored in sociological works since the Industrial Revolution as in its relationship with the capitalist system (e.g., Weber 1930). Given the long history and significance of the dehumanization-capitalism debate in sociology and philosophy, these works on dehumanization might have a stronger influence on the intuitive understanding of dehumanization of laypeople. Furthermore, while discussion of dehumanization from the psychological perspective centres around the internal feeling and thinking of dehumanizers and dehumanized, the philosophical and sociological questions related to dehumanization rather require the understanding of dehumanization as an *external event*. Thus, understanding the relationship between dehumanization and capitalism from the sociological perspective is a crucial tenet to lay theoretical groundworks for studying third-party consumers' perception of marketplace dehumanization. We interpret two of the most influential works, namely Economic and Philosophic Manuscripts by Karl Marx (Marx 1844) and The Protestant Ethic and the Spirit of

Capitalism by Max Weber (Weber 1930), regarding marketplace dehumanization, before briefly discussing their influence on the following sociological works and then collectively on laypeople's (Western) understanding of the dehumanization of employees. Note that we by no means attempt to analyze comprehensively all aspects of Weber and Marx's influential works or to debate their philosophical positions; rather, we only try to discuss how marketplace dehumanization and its relationship with capitalism have been examined in their works.

Marx's famous theory of alienation has long suggested the inseparability between the dehumanization of workers and the capitalist system (Marx 1844). Marx argues that the capitalist system alienates workers from (1) their product of labour, (2) from their activity of labour, (3) from their own humanity, and (4) from others. Not surprisingly, all these forms of alienation coincide closely with the dehumanization concept in the contemporary literature of dehumanization. The first two forms of alienation imply the animalistic form of dehumanization (i.e., a denial of agency) in which workers are separated from their goals (i.e., the products and goods which they produce) and their ability to act in their own free will (i.e., freedom in their behaviours), and are only the means to achieve the employers' goal. The workers are reduced to behaving merely to fulfil their animalistic survival needs. The third aspect of worker alienation depicts more explicitly the dehumanizing aspect of the capitalist system: the workers are excluded from their own humanity and specifically their human sensibilities. Living too long under a capitalist system, workers transform themselves into machines, being numb to the intrinsically sensuous and aesthetic value of reality, and can only see the utility and capital means of themselves and other entities. Therefore, workers are interchangeable in the capitalist society where monetary value triumphs over everything else. The final aspect of worker alienation concerns the exclusion of the worker from others and

society as a whole because the capitalist system pits workers against each other to gain a higher wage. The two later forms of alienation correspond closely with the mechanic dehumanization (a denial of experience), referring to the denial of the capacity for feelings and having emotions, which are a fundamental element of human connections. Essentially, Marx (1844) suggests that workers under the capitalist system must be stripped of their unnecessary humanity and reduced to mere instruments to create wealth for the system.

Weber (1930), on the other hand, argues that the rationalization of the capitalist society necessitates dehumanization of humans. According to Weber, the leading principle of capitalism is that "the making of money" is an end in itself and not "the means for the satisfaction" of material needs (p.18). Under a capitalist society, the rationalization of capital and that of organization of labour become dominant forces in daily economic activity. Any economic behaviours and decisions should be guided by rationality and reason (Elwell 1999). Rationalization gives rise to a bureaucracy that emphasizes efficiency, a specialized division of labour, impersonal rules, and hierarchical order. While rationalization is an underlying reason for unprecedented economic growth and the abundance of physical goods under the capitalist system, they ironically lead to irrationality (Freund 1968). One of the irrational aspects of the rationalized society is the dehumanization of human life, especially employees and workers, in a rationalized capitalist enterprise. Under the rationalized system, every action must be calculative, predictable, and rational to achieve the organization's end goals (i.e., the making of money). During that process, employees must be reduced to robot-like actions (Ritzer 1983) and thus disregard their own personal goals and actions (Bell and Khoury 2011). Dehumanization in the Weberian sense, similar to Marxism, reflects the lack of humanity in both dimensions, experience and agency. In a

rationalized capitalist firm, there is no room for unpredicted human actions and creativity, for own personal goals (i.e., agency) and emotionally-driven decisions and actions (i.e., experience).

Despite considerable disagreements on the many issues, Marx and Weber agree that, in the capitalist system, "the new world of rationalized efficiency has turned into a monster that threatens to dehumanize its creators" (Coser 1971, p. 232). The works of Marx (1844) and Weber (1930) still inspire the on-going debate about dehumanization, especially dehumanization of employees, under a capitalist society (Fromm 1974; Goldman and Falk 2003; Timmermans and Epstein 2010). Sociologists have drawn examples of dehumanization from various industries and domains such as fast-food restaurants (Leidner 1993; Ritzer 1983), dehumanization of factory and assembly-line workers (Blauner 1964; Thompson 1983), and consumption in general (Ritzer 2016). Overall, contemporary sociologists mostly agree that dehumanization is an inherent characteristic of the capitalist system. Therefore, given the enormous influences of Marxist and Weberian philosophy – followed by an extensive body of literature –on contemporary thinking in the West, we argue that most people who live and work under a capitalist system have formed the learned association between dehumanization and capitalism.

It is also noteworthy that, similar to psychological accounts of dehumanization, sociologists also suggest this phenomenon is commonplace under the capitalist system. However, unlike a psychology perspective, sociological works on dehumanization use the metaphorical link between a person and a robot/machine to represent not only a lack of the capacity for feelings and having emotions but also a lack of the capacity for thinking and having goals (e.g., repetitive tasks, strict code of conduct). In this research, we adopt the use of this metaphor in the sociological work such that we refer to

"*employees are treated as robots*" as being denied both experience and agency, because laypeople seem to use this metaphor in a similar manner (also discussed in section 2.1.5). Based on the psychological and sociological accounts of dehumanization, in the following sections, we contextualize the discussion of marketplace dehumanization by reviewing its common manifestations and then focusing on dehumanization of service employees, which is possibly the most common form of marketplace dehumanization.

2.3. Dehumanization in the Marketplace

The extant literature about dehumanization implies that both consumers and employees can be implicitly and explicitly dehumanized. Regarding dehumanization of consumers, previous studies suggest that certain service contexts and the social groups that consumers belong to can facilitate such dehumanization. Particularly in medical contexts, patients are frequently dehumanized by healthcare workers and doctors (Lammers and Stapel 2011; Vaes and Muratore 2013). Haque and Waytz (2012) suggest that this form of dehumanization in medicine can sometimes be driven by functional reasons such as mechanization (i.e., thinking about a patient's body as a sum of body parts for diagnosis localization), or empathy reduction (i.e., reduce empathy for patients to increase problem-solving ability) and/or by non-functional reasons such as deindividalization of customers (i.e., seeing all patients dressed in the same way), or impaired patient agency (i.e., patients, in fact, lack the capacity for cognitive thinking). In other contexts, customers can also be dehumanized by service employees with whom they interact if the customers belong to particular social groups such as low social class groups (Loughnan et al. 2014), immigrant groups (Costello and Hodson 2010), racial and ethnical groups (Bain et al. 2009; Goff et al. 2008), or are female (Loughnan et al.

2010; Vaes et al. 2011). This path to dehumanization is frequently exposed because the cues of customers' social groups can sometimes become immediately accessible for other marketplace actors during service interactions through their visual appearance (e.g., skin colour, work uniform, and gender), oral skills (speaking foreign languages), and nature of business (medical patients, criminal clients of lawyers). Sociologists also suggest that customers (although to a lesser degree compared to employees) under the capitalist system can also be reduced to robot-like actions to increase the efficiency, predictability, and calculability of service interactions (Ritzer 1983).

An employee is also a common dehumanized target in the modern marketplace. Various sorts of employees can be dehumanized. For example, most sociological works on dehumanization exemplify the dehumanization of manufacturing workers to discuss the consequences of capitalism (Blauner 1964; Marx 1844). In more extreme forms, sweatshop workers are clearly being treated as sub-humans who must work under inhumane working conditions (e.g., Arnold and Bowie 2003; Arnold and Hartman 2006; Snyder 2010). Nevertheless, another important manifestation of dehumanization that is subtler and less extreme, and hence more widespread, is dehumanization of employees (e.g., waiters, flight attendants, assembly-line service employees) in service industries. This form of dehumanization is also consequential because it might have important carryover effects on other marketplace entities (e.g., firms, consumers). This research focuses on this form of dehumanization and its downstream consequences. In the next section, we discuss the relevant literature on the dehumanization of service employees, thereby presenting how this practice can be visible and consequential during service interactions.

2.3.1. Dehumanization of Service Employees

Although service employees can be dehumanized by consumers (Henkel et al. 2018), we focus on a more common form of dehumanization of service employees, referring to the service practice that a service firm treats its employee like robots. While no research has systematically and explicitly studied this practice to date, the prevalence of dehumanization of service employees is shown in various ways that the firms instruct their employees to display, behave, and show their emotions.

Denial of the human nature or experience of employees manifests strongly in various ways related to the requests a firm makes of its service employees and how it treats them. For example, employees in many service firms have to wear a uniform, whereby the firms can strip away their individual identity and transform them into merely dressed image carriers of the firm or a position (Haque and Waytz 2012). This speaks for the firm's expectation of the homogeneity of employees' appearances without any individual deviations, and thus its deindividualization perception of employees. Haslam (2006) suggests that deindividualization is an important component of mechanic dehumanization by seeing individuals as lacking individuality, and consequently as interchangeable. He argues that social categorization motives underpin deindividualization, enabling in-group members to make collective decisions about out-group members. Similarly, earlier research on dehumanization also conceptualizes deindividualization as a part of dehumanization in inter-group contexts (Kelman 1973; Tajfel 1981). In our context, however, deindividualization rather functions as an efficient tool to impose a high level of controllability on individuals and to easily replace one with another.

Additionally, in many service industries, heavy usage of a strict service script also reflects an interchangeability aspect of mechanic dehumanization. Service scripts refer to behavioural and verbal prescriptions which specify task requirements, actions, or even words or phrases employees need to follow during service interactions (Nguyen et al. 2014; Victorino et al. 2012). Once service scripts dictate every aspect of how employees must behave and act during interactions (with customers), service employees can be easily replaced by others, and eventually robots/machines, by executing the scripts pre-assigned to the position. Furthermore, highly strict service scripts also explicitly show how employees should display their emotions, which are determined by firms rather than by their own internal emotional stages (Hochschild 1983). For example, a service firm might instruct its service employees through the service script to always warmly smile at their customers, regardless of any negative feelings associated with personal issues (e.g., death of a family member). These means of exerting complete control over employees' behaviour and emotion demonstrate a firm's dehumanization of its employees by denying their capacity for emotions and feelings.

The rigidity level of service scripts can also indicate the dehumanization of service employees regarding the denial of the mental capacity of thought. Service scripts offer the cognitive schema that employees can mindlessly follow without the need to expend any cognitive efforts (Ashforth and Fried 1988). Put differently, through a service script, a service firm views its employees as a physical tool who can only have one duty, executing a written demand. This can be exemplified by a typical strategy employed in many fast-food restaurants. In the essay "The McDonaldization of society", adopting the Weberian account of dehumanization, Ritzer (1983) argues that in an attempt to achieve the highest service rationalization which comprises the highest level of predictability, efficiency, calculability, and controllability, McDonald's

employees are reduced to some robot-like actions dictated by rules (i.e., service scripts) and machines.

In sum, both forms of dehumanization of service employees seem to be commonplace in many service practices. Arguably, service firms dehumanize their employees in order to increase service consistency and efficiency, and eventually maximize profitability (Ritzer 1983). One could argue further that there is a sociological reason underlying this form of dehumanization, such that a capitalist system compels firms to be more and more competitive, and accordingly more consistent and efficient, and eventually to exercise dehumanization of employees.

If service employees are frequently dehumanized by their firms, the next important question is whether and how this practice affects the involved individuals and society as a whole. From a sociological perspective, understanding this widespread phenomenon in the capitalist society is important by itself. Additionally, recent empirical evidence has shown that, when employees felt dehumanized by their organization, they feel less satisfied with their jobs, emotionally exhausted, and experience psychosomatic strains (Caesens et al. 2017). Furthermore, in those cases, dehumanization is also associated with other negative effects related to the firm, such as low affective commitments and high turnover intentions (Bell and Khoury 2016; Caesens et al. 2019). While no research has systematically studied the effect of dehumanization of service employees from a consumer perspective, we speculate that it can also influence customer perceptions about the service interactions and the firms. In the next section, we review the current findings of the consequences of dehumanization. By doing so, we offer the theoretical rationale for our predictions and also identify the important gaps in the extant literature that this research attempts to bridge.

Other Related Theories and Concepts

To build our theoretical foundation, we only draw literature on the sociology of dehumanization, service scripts, uniform, and emotional labour (in later chapters) as those bodies of literature is more relevant regarding displays of dehumanization to customers (e.g., uniform, service scripts) and the mechanism in which they react to dehumanization of service employees (i.e., dehumanization and capitalism link, emotional labour). However, it should be noted that there is a vast body of human resource and marketing literature on other dehumanization-related concepts such as job autonomy (e.g., Hackman and Oldham 1975; Morgeson et al. 2005; Ng et al. 2008; Parker et al. 2001; Wang and Netemeyer 2002), role clarity (e.g., Donnelly and Ivancevich 1975; Ivancevich and James H. Donnelly 1974; Kauppila 2014; Kohli 1985; Miles and Petty 1975; Teas et al. 1979; Whitaker et al. 2007), service and organizational improvisation (e.g., Barrett 1998; Chen et al. 2021; Ciuchta et al. 2021; Kauppila 2014; Secchi et al. 2019; Vera and Crossan 2005; Vera and Crossan 2004), emotional contagion (e.g., Barger and Grandey 2006; Du et al. 2014; Hennig-Thurau et al. 2006; Howard and Gengler 2001; Liu et al. 2019a; Pugh 2001; Woo and Chan 2020), and emotional intelligence (e.g., Gabbott et al. 2011; Johnson and Spector 2007; Kidwell et al. 2011; Sy et al. 2006). Nevertheless, we expect that this body of literature is less likely to offer crucial insight regarding the displays of dehumanization and/or consumer reactions to dehumanization. First, dehumanization of service employees might be related to service and organizational improvisation – referring to the creative and spontaneous way of achieving an objective (Vera and Crossan 2005) – and employees' emotional intelligence – referring to employee's ability to monitor and use one's and others' emotions to generate favourable outcomes (Kidwell et al. 2011) – and emotional

contagion – referring to people's likelihood of mimicking and synchronizing with others' emotions (Hennig-Thurau et al. 2006). However, dehumanization is clearly distinct from those concepts since it refers to a service practice rather than employees' ability (i.e., emotional intelligence), tendency or behaviour (i.e., emotional contagion, improvisation).

Second, one might conjecture that dehumanization of employees might be conceptually similar to job autonomy – referring to the extent to which the job allows freedom, independence and discretion to employees regarding the timing and working methods (Hackman and Oldham 1975) – and role clarity – referring to the extent to which information required for a job is provided (Donnelly and Ivancevich 1975). Particularly, dehumanization of service employees does not allow freedom of the job, but it provides a higher degree of job clarity. However, job autonomy and role clarity cannot capture the totality of the interested phenomenon because while both concepts tap into some aspects of the agency, they cannot capture the emotion-related aspect of dehumanization (e.g., denials of individuality and personal feelings). Furthermore, previous studies of job autonomy (e.g., Kohli 1985; Lang et al. 2007; Miles and Petty 1975; Morgeson et al. 2005; Ng et al. 2008; Parker et al. 2001; Wang and Netemeyer 2002) and employee's role clarity (e.g., Donnelly and Ivancevich 1975; Ivancevich and James H. Donnelly 1974; Lyons 1971; Teas et al. 1979; Whitaker et al. 2007) focus primarily on the impact on employee-related outcomes rather than consumer perceptions and evaluations, thereby limiting their application to an answer to our research question.

2.4. Empirical Evidence on the Consequences of Dehumanization and Marketplace Dehumanization

Empirical evidence suggests different harmful consequences of dehumanization

(Haslam and Loughnan 2014, 2016; Haslam and Stratemeyer 2016). Table 2

summarizes some key studies across disciplines that build on the four predominant

theories of dehumanization to investigate the consequences of dehumanization.

Table 2. *Summary of Key Empirical Research about the Consequences of Dehumanization*

Author	Contexts	Theory of Dehumanization	Types of consequence	Perspective	Key findings
Andrighetto et al. (2014)	General Social Interactions	Dual model	Prosocial consequence	Dehumanizer	When perceiving natural disaster victims as lacking either human nature traits or uniquely human traits, people tend to feel less empathy towards the victims, which in turn decreases their willingness to help them.
Bastian and Haslam (2011)	General Social Interactions	Dual model	Psychological consequence	Dehumanized	The feeling of being mechanically dehumanized is associated with cognitive deconstructive states and feelings of sadness while the feeling of being animalistically dehumanized is associated with aversive self-awareness, self-blame and feelings of guilt and shame.
Bell and Khoury (2016)	Organizational Interactions	Organizational dehumanization	Other consequences	Dehumanized	Organizational injustice increases perceived dehumanization, which then increases turnover intention among employees. The effect is only significant for female (vs. male) employees.
Caesens et al. (2017)	Organizational Interactions	Organizational dehumanization	Other consequences	Dehumanized	Low (vs. high) perceived organizational support leads to employees' feeling of being dehumanized by the organization, which results in lower satisfaction.
Caesens et al. (2019)	Organizational Interactions	Organizational dehumanization	Other consequences	Dehumanized	Experiencing abusive supervision results in employees' stronger feelings of being dehumanized by their organization, which in turn reduces their job satisfaction, and affective commitment, and increases their turnover intentions.
Cameron et al. (2016)	General Social Interactions	Mind attribution	Functional consequence	Dehumanizer	People might dehumanize stigmatized targets (e.g., drug addicts) to avoid affective costs (i.e., emotional exhaustion).

Castelo et al. (2019)	Marketplace Interactions	Dual model	General attitudinal consequence	Dehumanizer	Consumers dehumanize people who use enhancement products to radically enhance their mental capacities. Dehumanization reduces the consumers' interest in using those products.
Čehajić et al. (2009)	General Social Interactions	Infrahumanization	Prosocial consequence	Dehumanizer	Reminder (vs. no reminder) of in-group responsibility for past wrongdoings on out-group increases dehumanization, which in turn decreases the feeling of empathy to the out-group.
Cuddy et al. (2007)	General Social Interactions	Infrahumanization	Prosocial consequence	Dehumanizer	People infer lower uniquely human emotions of out-group victims than of in-group victims, which leads to a lower tendency to help the infrahumanized victims.
Greenhalgh and Watt (2015)	General Social Interactions	Infrahumanization	General attitudinal consequence	Dehumanizer	Dehumanization towards asylum seekers tends to have a more negative attitude towards the seekers.
Henkel et al. (2018)	Marketplace	Dual model Mind attribution	Antisocial consequence	Dehumanizer	Consumers who adopt a price-conscious mentality tend to dehumanize service employees, which leads to harsher punishment of the employees when service failures occur.
Herak et al. (2020)	Marketplace	Mind attribution	General attitudinal consequence	Dehumanizer	When a human and an object are paired in an ad (vs. human only), people tend to dehumanize the human, which leads to a negative attitude towards the human and the ad. In contrast, when comparing the ad with an object-only ad, people tend to anthropomorphize the object, which leads to a higher attitude towards the object and the ad.

Hodson and Costello (2007)	General Social Interactions	Infrahumanization	General attitudinal consequence	Dehumanizer	Dehumanization mediates the effect of interpersonal disgust on the negative attitudes towards immigrants.
Lammers and Stapel (2011)	General Social Interactions	Dual model	Functional consequence	Dehumanizer	People who are in a powerful position tend to dehumanize others, which strikingly enables them to make a tougher and more effective decision in the long run which is more painful in the short run.
Leidner et al. (2013)	General Social Interactions	Dual model	Antisocial consequence	Dehumanizer	The more people perceive opponent out-groups as lacking human nature traits, the greater they prefer retributive justice (e.g., punishment) and the less they seek restorative justice (e.g., value reaffirmation), and consequently the more they support bombing attacks and the less they support peace deals.
Martínez et al. (2017)	General Social Interactions	Dual model	Prosocial consequence	Dehumanizer	People prefer interacting with members of a group perceived as fully human in both social and professional contexts. However, they prefer interacting with members of an animalistically dehumanized group in social contexts to professional contexts and interacting with members of a mechanically dehumanized group in professional contexts to social contexts.
Rudman and Mescher (2012)	General Social Interactions	Dual model	Antisocial consequence	Dehumanizer	Men who dehumanize women tend to score higher on the rape proclivity scale and higher in negative attitudes towards rape victims.
Terskova and Agadullina (2019)	General Social Interactions	Dual model	Prosocial consequence	Dehumanizer	People tend to dehumanize dirty workers (vs. non-dirty workers), which in turn results in a lower attitude towards the social support for those workers.

Vaes and Muratore (2013)	General Social Interactions	Infrahumanization	Functional consequence	Dehumanizer	Dehumanization could be a defensive mechanism to avoid burnout among healthcare workers such that, when inferring more uniquely human emotions from a patient, healthcare workers report more symptoms of burnout, especially when they have direct contact with the patients frequently.
Vaes et al. (2002)	General Social Interactions	Infrahumanization	Prosocial consequence	Dehumanizer	When an email is written in more humanizing language (i.e., expressing more secondary emotions), readers tend to have stronger intentions to help the sender.
Vaes et al. (2003)	General Social Interactions	Infrahumanization	Prosocial consequence	Dehumanizer	When out-group members express uniquely human emotions, people tend to act in a negative way towards those members. This supports the infrahumanization hypothesis.
Viki et al. (2013)	General Social Interactions	Dual model	Antisocial consequence	Dehumanizer	Dehumanization of Muslim out-group increases the proclivity to torture. The effect is stronger when perceiving threat from the out-group.
Waytz and Epley (2012)	General Social Interactions	Infrahumanization Mind attribution, Dual model	Antisocial consequence	Dehumanizer	Feeling more socially connected with close others leads to the dehumanization of other groups because it diminishes the motivation to seek connection. Dehumanization consequently increases endorsement of harsh questioning methods used on suspected terrorists, such as electric shock.
Zebel et al. (2008)	General Social Interactions	Infrahumanization	Prosocial consequence	Dehumanizer	Dehumanization is negatively associated with support for reparation policies.
Zhang et al. (2015)	General Social Interactions	Dual model	Antisocial consequence	Dehumanizer	When people feel interpersonally secure, they are less likely to mechanically dehumanize others and consequently are less likely to prefer harsh treatment of others (e.g. low-income inhabitants).

First, dehumanization can facilitate immoral and antisocial behaviours across various contexts. For example, Leidner et al. (2013) show that, when people perceive opponent out-groups as more lacking in human nature traits, they tend to seek retributive justice (e.g., punishment) more and they seek restorative justice (e.g., value reaffirmation) less, and consequently they are more likely to support bombing attacks and less likely to support peace deals. Likewise, Waytz and Epley (2012) demonstrate that feeling more socially connected with close others can increase the dehumanizing perception of out-groups, which in turn increases endorsement of harsher torture methods used on suspected terrorists. Apart from the endorsement of harm, dehumanization can increase a tendency to directly impose extremely adverse treatments on others (e.g., Rudman and Mescher 2012; Viki et al. 2013). In the less extreme context (e.g., marketplace), dehumanization triggered by consumers' price-conscious mentality can increase the punishment of service employees when service failures occur (Henkel et al. 2018).

Second, dehumanization reduces the intention to act and interact collectively. Particularly at individual and group levels, dehumanization diminishes individual intentions to help and support dehumanized others (Andrighetto et al. 2014; Cuddy et al. 2007; Terskova and Agadullina 2019; Vaes et al. 2003; Vaes et al. 2002), possibly through preventing the dehumanizers from feeling empathy towards the others (Andrighetto et al. 2014; Čehajić et al. 2009). At the national level, dehumanization is also negatively associated with support for reparation policies (Zebel et al. 2008). Furthermore, Martínez et al. (2017) show that people are less likely to interact with members of dehumanized out-groups compared to an out-group that is perceived as fully human. They also showed that, among dehumanized groups, people prefer interacting with members of an animalistically dehumanized group in social contexts

(vs. professional contexts) and interacting with members of a mechanically dehumanized group in professional contexts (vs. social contexts).

Third, dehumanization leads to general negative attitudes and evaluations towards dehumanized targets (e.g., Greenhalgh and Watt 2015; Herak et al. 2020; Hodson and Costello 2007). For example, Greenhalgh and Watt (2015) demonstrate that the more people dehumanize out-group asylum seekers, the greater is their prejudice towards the seekers. Herak et al. (2020) show that, because people are more likely to dehumanize a person in an ad who is paired with an object (vs. a person appearing alone), this then leads to a lower evaluation of that person. Especially in the marketplace, the negative effect of dehumanization can also transfer to the assets (e.g., ads, products) related to those targets (Castelo et al. 2019; Herak et al. 2020).

Finally, a feeling of being dehumanized during social interactions is also cognitively and emotionally harmful. While the feeling of being mechanically dehumanized is associated with cognitive deconstructive states and feelings of sadness, the feeling of being animalistically dehumanized is associated with aversive self-awareness, self-blame, and feelings of guilt and shame (Bastian and Haslam 2011). In organizational contexts, such a feeling can lead to many negative consequences such as higher turnover intentions and lower satisfaction (Bell and Khoury 2016; Caesens et al. 2019; Caesens et al. 2017).

Yet, dehumanization might sometimes be useful for the dehumanizer and the dehumanized (Haque and Waytz 2012). Particularly, healthcare workers who humanize (i.e., infer more uniquely human emotions) a terminal patient report more symptoms of burnout, implying dehumanization as a defensive mechanism (Vaes and Muratore 2013). Similarly, Cameron et al. (2016) demonstrate that people are more likely to dehumanize stigmatized targets (vs. non-stigmatized targets) when they try to avoid

emotional exhaustion. Furthermore, doctors who dehumanize their patients are more likely to suggest a more effective long-term treatment which is more painful in the short term (Lammers and Stapel 2011). In a nutshell, a limited number of studies show some functional effects of dehumanization, this aspect, nevertheless, is not well-documented in contemporary literature. We predict that dehumanization of employees might also have some functional effects on consumers, and consequently on firms.

Additionally, the central focus of previous studies is concerned with the consequences of dehumanization on dehumanizer and eventually dehumanized. Nevertheless, the effects of dehumanization on third-party observers remain unknown. Note that dehumanization is a commonplace phenomenon and it is becoming increasingly frequent to see circumstances in which individuals or groups are dehumanized by others. This becomes abundantly clear in the cases of dehumanization of service employees which have attracted great media attention recently, and the attention of sociologists since the Industrial Revolution. Thus, studying how outside parties react to dehumanization is crucial to deepen the understanding of this important phenomenon.

In sum, although previous research has shown various harmful costs of dehumanization and illuminated some defensive functions of dehumanization in certain contexts, some important gaps still remain that our research sets out to fill. Particularly, we believe that investigating dehumanization in the marketplace can contribute extensively to this emerging literature for two main reasons. First, marketplaces are strikingly different from other social contexts as the monetary value in marketplaces, in most cases, trumps everything else. Appreciation of human qualities that have (and should have) the paramount importance in most social interactions might be deprioritized in the marketplace to embrace this value. Such an irrational notion was

argued in the famous work by Weber (1930) and empirically supported in recent research (Henkel et al. 2018; Ruttan and Lucas 2018) which show that, when people focus on gaining the highest monetary value, they tend to discount the humanity of others and their own. Second, marketplace dehumanization can be seen frequently during service encounters (e.g., coffee shops, fast-food restaurants), attracts extensive media coverage (e.g., BBC News 2018; Boyle et al. 2017; Guendelsberger 2019; Heffernan 2020; Parkinson 2015; Yusuf 2019), and has been strongly associated with the capitalist system since the Industrial Revolution (Marx 1844; Weber 1930). Put differently, marketplace dehumanization is a well-known phenomenon and can evoke strong reactions among third-party consumers that deserve to be systematically investigated.

However, it is still unclear how consumers might react to this form of dehumanization. As previously discussed, because dehumanization is generally harmful, one might suspect that consumers also react negatively towards dehumanization of service employees. Nevertheless, previous evidence also shows that dehumanization has some functional effects in medical contexts. In our contexts, marketplaces, especially in the West, are governed by the capitalist system. The perception of this system itself might strongly affect individuals' perceptions and expectations of human interactions within it. Particularly, we predict that dehumanization in commercial settings might have some particular functional consequences (i.e., signifying a typical capitalist firm that embraces efficiency, consistency, and predictability of service interactions), in addition to its function in medical contexts. This unique aspect of the dehumanization of service employees can also influence the perceptions of third-party consumers. We return to this point in Chapter 3, section 3.4. Given the historical association between dehumanization and capitalism, we predict that people who hold a different belief about

the capitalist system might react differently towards the dehumanization of service employees. In other words, political ideology should be a defining factor that shapes consumer reactions towards dehumanization of service employees.

2.5.   Political Ideology

People adopt a certain ideology to make assumptions or assertions about human nature, historical events, present realities, and future possibilities, thereby explaining the world around them, as well as to envision ideal social, political, and economic systems (Jost et al. 2009). Political ideology, accordingly, can be understood as a "set of beliefs about the proper order of society and how it can be achieved" (Erikson and Tedin 2003, p.64). According to Jost (2006), political ideology includes cognitive, affective, and motivational components that help to provide reasons why people do what they do and how the world around them should function. In general, the ideological distinction between liberals and conservatives mainly contains two core elements, the attitude towards social change – advocating versus resisting– and the attitude towards inequality – rejecting versus accepting (Jost 2006). Furthermore, although it is feasible to conceptualize political ideology using multiple dimensions (e.g., social and economic), it can also be captured in a single liberal-conservative (or left-right) continuum (reviewed in Jost et al. 2009; Jung and Mittal 2020). Unidimensional measurement of political ideology also has been empirically and theoretically supported (Hetherington 2001; Layman and Carsey 2002; Stimson 2015). Particularly, both social and economic dimensions of political ideology can be explained by the same underlying social, cognitive, and motivational needs, such as the need for order and certainty (Jost et al. 2003a; Jung and Mittal 2020). Additionally, current evidence shows that when the

political competition is heightened, people are motivated to simplify and structure their political ideology into a single left-right dimension (Jost et al. 2009). Benoit and Laver (2006) provide further evidence that social and economic dimensions of political ideology are likely to be loaded on a single factor in most countries they investigated. Thus, while using a single political ideology dimension might not be exhaustive, Jung and Mittal (2020) conclude that the self-identified liberal-conservative scale is satisfactory in most marketing contexts, as evidenced by its predictive powers in many contexts of consumer behaviour (e.g., Han et al. 2019; Irmak et al. 2020; Kidwell et al. 2013).

2.5.1. Overview of Political Ideology in Consumer Research

Political ideology in marketing and consumer research is an emerging body of literature (Jung and Mittal 2020). Clearly, understanding the political ideology of the target audiences is vital for political marketing – such as marketing campaigns of candidates for presidential elections (Jost 2017b). However, investigation into the roles of political ideology in shaping other politics-unrelated consumer behaviours and consumer choices of products, brands, and services draws more attention among marketing and consumer researchers. In the paradigm of consumer culture theory, previous studies demonstrate that consumers might try to express or reinforce their political ideology to themselves and to others through their consumption (Crockett and Wallendorf 2004; Legg et al. 2012). Yet, because ideological differences incorporate deeper psychological differences including motives, needs, personal values, morality, personality, and cognitive factors (Graham et al. 2009; Jost et al. 2016; Jost et al. 2009; Jost et al. 2003a; Tetlock 1983), an emerging body of the literature mostly comprises psychology-based studies that emphasize how the ideological difference can shape

consumer behaviour, decision-making, and preference. Table 3 provides a summary of the key studies related to consumers' political ideology.

Table 3. *Summary of Key Empirical Research Investigating Political Ideology in the Marketplace*

Authors	Research Areas	Theoretical Framework	Research Domains	Importance of Employee Interaction	Key Findings
Angle et al. (2017)	Ethnic brand imagery	Stereotype malleability	Brands	Low	Exposure to ethnic brand imagery increases implicit stereotypes for liberals but not for conservatives because liberals are more malleable.
Chan (2020)	Anthropomorphism	Uncertainty avoidance Need for order	Products	Low	Conservatives are more likely to anthropomorphize consumer products to reduce uncertainty in the marketplace. The effect is strengthened when products are unpredictable.
Chan and Ilicic (2019)	Branding	Uncertainty avoidance	Brands	Low	Because of their tendency to reduce uncertainty, conservatives have a stronger brand attachment, which results in their lower price sensitivity and purchase intention. The effect is cancelled when the brand has a foreign country of origin.
Farmer et al. (2020a)	Charitable behaviour	Social order vs. social justice	Charities Scholarships	Low	Liberals and conservatives tend to donate similar amounts of money. However, conservatives are more likely to donate less money to a higher number of charities, people, and causes, whereas liberals are more likely to donate more money to fewer charities, people, and causes.
Farmer et al. (2020b)	Hedonic vs. utilitarian consumption	Intolerance of ambiguity	Products Jobs	Low	Conservatives (liberals) prefer utilitarian (hedonic) options because conservatives have a lower (vs. higher) tolerance of ambiguity.

Fernandes and Mandel (2014)	Variety seeking	Personal value: norm conformity	Products	Low	Although conservatives have a high desire for control which negatively impacts variety seeking, they still exert a higher tendency to seek variety than liberals due to their stronger desire to follow social norms.
Han et al. (2019)	Risk taking	Social dominance orientation	Financial investments Assets	Low	Conservatives have a higher risk-taking tendency when self-efficacy is higher (vs. low). However, among liberals, the effect is insignificant. This is because conservatives with high self-efficacy are more likely to focus on the upside potential of the risky decision.
Irmak et al. (2020)	Consumption regulations	Threat to freedom	Products Advertisements	Low	Conservatives are more likely to oppose consumption regulations issued by a government because they feel their freedom is threatened.
Jung et al. (2017a)	Complaint behaviour	System justification motivation	Products Services	Low/medium	Conservatives are less likely to complain and also less likely to dispute complaint resolutions due to stronger system justification motivations.
Kaikati et al. (2017)	Charitable behaviour	Personal values: conformity	Charities	Low	When being accountable for liberals and sharing a salient identity, conservatives donate more because of their desire for social approval. In contrast, liberals do not exhibit similar behaviour.
Khan et al. (2013)	Brand and product preferences	Preference for tradition Accept the status quo Uncertainty avoidance Openness to new experiences	Brands Products	Low	Conservatives are more likely to choose established national brands (vs. generic substitutes) and less likely to buy a newly launched product.

Kidwell et al. (2013)	Sustainable behaviour	Moral Foundation Theory	Advertisements	Low	Individual appeal (binding) increases fluency for liberals (conservatives), which in turn increases recycling intention. Recycling intention also has a spillover effect on green product usage intention and sustainable usage intention.
Kim et al. (2018)	Luxury consumption	Social Change vs. Stability	Brands Products Advertisements	Low	Conservatives increase their desire for luxury goods when status-maintenance (vs. status-advancement) goals are activated because of their preference for social stability.
Ordabayeva and Fernandes (2018)	Luxury consumption	System justification motivation Hierarchy Legitimacy Beliefs	Brands Products	Low	Conservatives (vs. liberals) are more likely to select vertical (vs. horizontal) differentiation products that signal higher status (vs. uniqueness). This is because conservatives endorse, and liberals oppose, a dominance-based hierarchical structure.
Septianto et al. (2019)	Persuasion	Emotion prioritization	Advertisements	Low	When anti-counterfeit ads use gain (vs. loss) message framing, the ads are more persuasive for liberals (vs. conservatives).
Tal et al. (2017)	Food tastiness	Moral disgust	Products	Low	Consumers perceive food products to be less tasty when the products are from a company that donates to a political party they oppose. Moral disgust mediates the effect.
Winterich et al. (2012)	Charitable behaviour	Moral Foundation Theory	Charities	Low	Conservatives (vs. liberals) are more likely to donate more than liberals (vs. conservatives) when the cause is associated with binding (individualizing) moral foundations. The effect is amplified (vs. eliminated) in the case of high (vs. low) moral identity internalization.

Overall, previous studies suggest that conservative consumers and liberal consumers express distinctive preferences and behaviours across various domains – such as variety-seeking behaviours (Fernandes and Mandel 2014), risk-taking behaviours (Han et al. 2019), complaint behaviours (Jung et al. 2017a), charitable and sustainable behaviours (Farmer et al. 2020a; Kaikati et al. 2017; Kidwell et al. 2013; Winterich et al. 2012), luxurious consumption (Kim et al. 2018; Ordabayeva and Fernandes 2018), tendency to anthropomorphize (Chan 2020), preference between hedonic vs. utilitarian options (Farmer et al. 2020b), and preferences for national brands vs. newly launched products (Khan et al. 2013). The differences in consumer behaviours across the political spectrum can be categorized as consequences of the ideological differences regarding four broad psychological domains, (1) personalities and cognitive abilities, (2) beliefs and motivation interests, (3) different moral foundations, and (4) personal values.

First, conservatives and liberals possess different dispositional personalities and cognitive abilities (Jost 2017b) which can exert a strong influence on their behaviours in the marketplace. For example, because conservatives are more likely to avoid uncertainty and ambiguity than liberals (Jost 2017a; Jost et al. 2003a), they are prone to anthropomorphize products (Chan 2020) and attach themselves to a brand (Chan and Ilicic 2019) to regain certainty and consume the products and brands that are inherently less ambiguous, including well-established brands (Khan et al. 2013) and utilitarian products (Farmer et al. 2020b). Additionally, Angle et al. (2017) argue that, as conservatives are more mentally rigid whereas liberals are more open to new experience, the latter have a more malleable worldview. As such, liberals are more susceptible to implicit stereotypes when being exposed to ethnic brand imagery (e.g., Native American logos).

Second, people on different political ideology spectrums also hold different beliefs and motivation interests (Jost et al. 2013), which can also explain various consumer behaviours. For example, conservatives (vs. liberals) have a stronger system justification motivation, which then decreases their intention to complain and to dispute complaint solution when dealing with unsatisfactory products and services (Jung et al. 2017a). Likewise, Ordabayeva and Fernandes (2018) show that, because of their stronger motivation to justify the system and especially their beliefs in the legitimacy of the hierarchical structure, conservatives (vs. liberals) prefer vertically differentiating products to horizontally differentiating products, while the preference is reversed for liberals.

Third, when it comes to morality, Graham et al. (2009) suggest that conservatives and liberals possess different moral foundations, such that conservatives are more likely to emphasize in-group/loyalty, authority/respect, and purity/sanctity (i.e., binding moral foundations), whereas liberals are more likely to emphasize harm/care, fairness/reciprocity (i.e., individualizing moral foundations). The moral foundation theory is typically used in studying the ideological difference in engaging prosocial behaviours. Particularly, Winterich et al. (2012) suggest and show that conservatives (vs. liberals) are more likely to donate to a charity that adopts binding (vs. individualizing) moral foundations. Similarly, Kidwell et al. (2013) find a similar effect in the context of advertisements for promoting sustainable behaviours. An ad that contains binding (individualizing) moral foundations is more effective in persuading conservatives (vs. liberals) to recycle.

Last but not least, conservatives and liberals are also different from each other in terms of ranking personal values – such as equality, social justice, and hierarchy (Jost et al. 2016). Consumer researchers have utilized the ideological differences in personal

values to illuminate several consumer behaviours and preferences. Irmak et al. (2020) show that conservatives (vs. liberals) are more likely to engage in behaviours that oppose regulations from the government, probably because conservatives, especially economic conservatives, prioritize consumer freedom. Farmer et al. (2020a) show that, while liberals and conservatives might donate a similar amount to charity, the former tend to donate more money to fewer charities, people, and causes as they promote social justice, whereas the latter tend to donate less money to more charities, people, and causes as they promote social order. Likewise, Kim et al. (2018) demonstrate that, because conservatives (vs. liberals) promote social stability (vs. change), they are more likely to consume luxury goods when a status-maintenance goal is salient. Additionally, grounding on the insight that conservatives are more likely to conform to the social norms (i.e., prioritization of conformity), previous research shows that conservatives are more likely to seek variety in consumption as a social norm (Fernandes and Mandel 2014) and to donate more when being accountable (vs. not accountable) for liberal audiences because of the desire for social approval from audiences whom they believe to be more generous (Kaikati et al. 2017).

2.5.2. Gaps in the Literature about Consumers' Political Ideology

Although consumer researchers have illuminated the strong influence of political ideology in various consumer and marketing domains including products, brands, and advertisements, there is a surprising lack of research investigating the political ideology roles in service contexts, especially how political ideology shapes consumer expectations and evaluations of their interactions with service employees (as summarized in Table 2). Only a study by Jung et al. (2017a) might offer some insights

to service managers by showing a difference between conservatives and liberals when it comes to complaining behaviour and complaint handling, one of the key areas of service marketing. Even then, interactions between employees and customers are not their focus. Interesting, the recent systematic review by Jung and Mittal (2020) published in the Journal of Retailing summarizes the roles of political ideology in the retailing context – a key service sector – and yet only emphasizes its roles regarding other retailing entities, such as brands and products, rather than *service* employees. It is noteworthy that there are clear differences between liberals and conservatives in their behavioural patterns during interpersonal interactions (Carney et al. 2008; Van Lange et al. 2012). Therefore, we reason that conservatives and liberals should have distinctively different expectations of ideal consumer-employee interactions. Nevertheless, this area has not been thoroughly examined. In sum, the understanding of the influence of political ideology on consumers' evaluations of service firms in general, and service employees in particular, remains incomplete. Therefore, further research about its interplay with human interactions in the marketplace is clearly needed.

Another aspect of consumers' political ideology that is not thoroughly investigated is the way liberals and conservatives process information. Particularly, Jost (2017a) suggests that conservatives are more likely to engage in an automatic, intuitive, heuristic process – also known as System 1 – than liberals, whereas liberals are more likely to engage in a systematic, effortful, and deliberate thinking process – also known as System 2. This difference in cognitive thinking style can have a strong implication in the marketing context when customers need to process information and cues about firms, especially the stereotypical firms. Previous studies examining consumers' political ideology have utilized highly-related concepts including uncertainty avoidance (Chan 2020; Chan and Ilicic 2019; Khan et al. 2013) and intolerance of ambiguity

(Farmer et al. 2020b) which can be used as an indication of a preference for System 1 (Jost 2017a). Nevertheless, these studies concentrate on how these particular factors, not as proxies of cognitive thinking styles, operate in defining specific behaviours (e.g., preference for ambiguous products) but neglect their implications for cognitive thinking styles when processing information about products and brands.

In this dissertation, we aim to contribute to the current understanding of consumers' political ideology by investigating its role in determining consumer reactions and perceptions towards a particular service practice (i.e., dehumanization of service employees). Furthermore, we build our theory grounding on the previous findings that conservatives and liberals prioritize different basic personal values when judging social interactions and that they adopt distinctive cognitive styles when processing information, thereby adding other important psychological factors associated with a political ideology that explain the difference between conservatives and liberals in marketplace behaviours.

2.6. Differentiation of Political Ideology

The differences between liberals and conservatives exist in various areas comprising personality traits, cognitive processing styles, motivational interests and concerns, value prioritization, moral foundations, and neurological structures (Jost 2017b; Jung and Mittal 2020). Consumer researchers have contextualized these differences in order to discover and explain a wide range of behaviours in marketing contexts (see section 2.5.1 for a review). Likewise, this research also builds on these insights to develop our hypotheses. In particular, we inherit the current understanding of ideological differences in value prioritization and cognitive thinking styles to

hypothesize and explain the consumers' reactions to dehumanization of employees for several reasons. First, as discussed earlier, previous consumer studies focus on the differences between liberals and conservatives in other areas (e.g., moral foundations, motivational interests and concerns); by utilizing these two differences, this research can offer a novel angle to understand how political ideology can also shape consumer behaviour. We elaborate more on the novelty in the following section, 2.6.1 (and 2.5.2). Furthermore, value prioritization and cognitive process style are highly applicable to dehumanization of service employees. Specifically, because we reason that the capitalism-dehumanization relationship is intuitive and heuristic, the cognitive thinking style should then define, at least in part, how consumers perceive this relationship (see section 3.4). Additionally, we reason that dehumanization of service employees can alter the interpersonal interactions between customers and employees. The evaluations of the interactions are clearly directed by how individuals perceive the values embedded in those interactions. Similar logic is applied in the previous consumer studies that ground on the ideological difference in political value prioritization (e.g., Farmer et al. 2020b; Irmak et al. 2020; Kim et al. 2018). In the following sections, we briefly summarize the ideological differences in personal value prioritization and cognitive processing style to lay out the foundation for our hypotheses.

2.6.1. Differences in Personal Value Prioritization between Liberals and Conservatives

The concept of human values is always an important subject in social science, and attracts theorists and researchers from different academic fields (e.g., Allport 1961; Kelman 1961; Maslow 1954; Rokeach 1973; Schwartz 1992; Tetlock 1986; Williams

1968). People use a particular set of human values as overarching principles to make and to explain their judgements about whether events, people, or actions are good or bad in many aspects of human life (Piurko et al. 2011). Among numerous conceptualizations of human values, Schwartz's (1992) theory of basic personal values is presumably the most influential model in contemporary scientific studies (Brosch and Sander 2013). This theory also serves as the groundwork for this research. In this section, we first briefly discuss Schwartz's theory about basic personal values. Second, we review the previous studies about the association between political ideology and the prioritization of personal values, thereby providing an important theoretical foundation for this research.

Schwartz's Theory of Basic Personal Values

Schwartz's (1992) theory proposes 10 basic personal values comprising power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, conformity/tradition, security, and achievement. Table 4 provides the definitions of the 10 values that are based on different motivational goals embedded in each value. The theory suggests that each of the 10 values has a particular level of importance for each individual and the order of importance also varies across different individuals (Schwartz 2012). For example, one might regard the value of security as the top priority whereas that for another person is universalism.

Table 4. *Definitions of the 10 Personal Values from Schwartz et al. (2010)*

Value	Definition regarding motivational goals
Power	Social status and prestige, control or dominance over people and resources
Achievement	Personal success through demonstrating competence according to social standards
Hedonism	Pleasure and sensuous gratification for oneself
Self-direction	Independent thought and action – choosing, creating, exploring
Stimulation	Excitement, novelty, and challenge in life
Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact
Tradition	Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide the self
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms
Security	Safety, harmony, and stability of society, of relationships, and of self

Schwartz also proposes the organization of those values in a circular continuum (see Fig. 1) which represents the dynamic relationships among them. Particularly, any two adjacent or closely-situated values are more likely to be congruent and can be achieved and expressed through the same actions and attitudes, whereas any two values which are situated opposite or distant from each other are more likely to be conflicting and incongruent, and cannot be achieved and expressed through the same actions and attitudes (Schwartz et al. 2010). For example, many voluntary behaviours can express universalism (welfare of all people) and benevolence (welfare of close others) and typically cannot express power (dominance over people). Nevertheless, a single person can pursue opposite values (e.g., universalism and power) through different actions and

behaviours (Schwartz 2012). Based on the congruity and incongruity of those values, Schwartz's theory further organizes the 10 values into four broad groups along two dimensions. The first dimension, namely self-enhancement (power, achievement, hedonism) vs. self-transcendence values (universalism, benevolence), reflects the conflict between values that emphasize one's own outcomes and success and values that emphasize concerns for the welfare of others. The second dimension, namely openness to change (self-direction, stimulation) vs. conservation (security, conformity/tradition), reflects the conflict between values that emphasize independent thoughts and actions, novelty, and change, and values that emphasize stability, preservation of tradition, and respecting order and resistance to change.
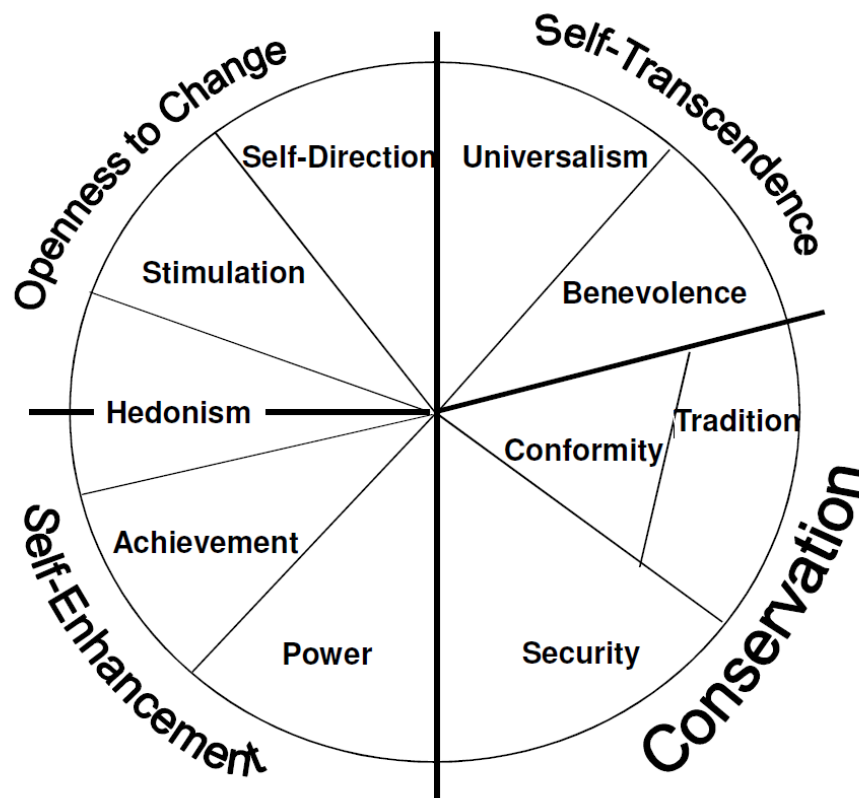
Figure 2. *The Theoretical Model of Relations among the 10 Motivational Types of Value (Schwartz 2012)*

Schwartz's circumplex model has been validated across more than 200 samples from 82 countries using different operationalization methods of values (Bilsky et al. 2011; Davidov et al. 2008; Schwartz 1992, 2006; Schwartz and Boehnke 2004). Across all studies, the circular structure is universally present with the emergence of four groups across two dimensions representing the conflicts and compatibility among them. Furthermore, the contents of the 10 personal values are empirically distinctive across most samples. Thus, the theory provides a reasonably comprehensive set of human values that are universal across cultures (De Clercq et al. 2008).

It should be noted that, while Schwartz's theory distinguishes 10 basic personal values and can be organized into four main groups along two dimensions, the circular structure also suggests that any of two adjacent values can be integrated into a higher-order value underlying a more nuanced motivation (Schwartz 2012). For example, power and achievement can be integrated to underline motives of social superiority and esteem, or self-direction and universalism can be integrated to underline motives of respecting one's own judgement and others' judgements and promoting diversity (Schwartz 1992). Thus, Schwartz (2012) suggests that, when applying the basic personal value theory, researchers can use any value or any combinations of values depending on the objectives of the analysis. In a similar vein, despite not using Schwartz's theory as the theoretical framework, consumer scholars have used this approach when incorporating personal values into their studies (Fernandes and Mandel 2014; Kaikati et al. 2017).

How Liberals and Conservatives Prioritize Their Personal Values

Although the ideological difference in prioritization of value was examined a while ago (Braithwaite 1998; Rokeach 1973; Tetlock 1986), the Schwartz's cross-

cultural theory of personal values that presumably incorporates all basic personal values provides a comprehensive framework to understand the value prioritization difference between liberals and conservatives in a more systematic way. In fact, by applying Schwartz's theory, later studies conducted in various countries were able to demonstrate that the 10 personal values carry different weights for liberals and conservatives when guiding attitudes, judgements, and behaviours (Jost et al. 2016).

Devos et al. (2002) show that Swiss students who affiliate with left-wing parties are more likely to place higher importance on universalism, whereas students who affiliate with right-wing parties are more likely to place higher importance on power, conformity, and security. When mapping all values onto the two dimensions in Schwartz's theory (i.e., openness to change vs. conservation, self-transcendence vs. self-enhancement), they also found that left-wing supporters prioritize openness to change and self-transcendence while right-wing supporters prioritize conservation and self-enhancement.

Caprara et al. (2006) conducted a study with 3044 participants who had voted in the 2001 Italian national election. They showed that centre-left voters prefer universalism the most, followed by benevolence, and self-direction, whereas centre-right voters prefer security the most, followed by power, conformity, achievement, and tradition. A longitudinal study by Schwartz et al. (2010) obtained a similar effect with a sample of 1699 adults in T1 (pre-election) and 1030 adults in T2 (post-election) in the 2006 Italian national election, such that a tendency to vote for centre-left is positively associated with universalism, benevolence, and self-direction whereas a tendency to vote for centre-right is positively associated with security, tradition, conformity, power, and achievement. The result is confirmed by the re-analysis by Vecchione et al. (2013) detailed in Study 1.

Piurko et al. (2011) offer more extensive evidence by using a probability sample of 35,116 citizens of 20 countries that participated in the European Social Survey Round 1 from 2002-2003. Piurko and colleagues divided the 20 countries into three groups, namely liberal countries which have a liberal democracy and welfare-state system (e.g., Austria, Germany, the United Kingdom), traditional countries whose politics are heavily influenced by religion (e.g., Greece, Spain, Portugal), and post-communist countries (e.g., Czech Republic, Hungary). In both liberal and traditional countries, self-identified "lefties" consistently score higher in universalism and benevolence whereas self-identified "righties" score higher on conformity, power, tradition, and security, with some exceptions. Self-direction is also positively correlated with the left self-placement in six countries, uncorrelated with political orientation in 10 countries, and positively correlated with right self-placement in one country. Also using the European Social Survey but Round 3 (2006-2007) and Round 4 (2008), Aspelund et al. (2013) demonstrate that, in the Western-like countries (e.g., Croatia, Slovenia), resistance to change, a composite scale of conservation and (reversed) openness to change, and acceptance of inequality, a composite scale of self-enhancement and (reversed) self-transcendence, are positively correlated with right self-placement.

Similarly, Jost et al. (2016) using a sample of 259 American students show that self-identified conservatives prefer conformity, tradition, achievement, and power while self-identified liberals prefer universalism and self-direction.

In sum, the findings across different Western countries consistently indicate that liberals and conservatives have a differing prioritization of personal values, such that liberals are more likely to value universalism, and (with less consistency) benevolence, and self-direction whereas conservatives are more likely to value conformity, tradition, security, and power. In this research, we use this finding as a theoretical foundation for

59

our research to hypothesize how liberal consumers (vs. conservative consumers) might

respond differently to the dehumanization of service employees. Note that previous

consumer research also uses the difference in value prioritization between liberals and

conservatives to explain various consumer behaviours in the marketplace. Nevertheless,

the values utilized in the previous studies are mostly related to political values including

freedom (Irmak et al. 2020), social justice vs. social order (Farmer et al. 2020a), and

social stability vs. social change (Kim et al. 2018), while there is only one basic

personal value used, namely conformity (Fernandes and Mandel 2014; Kaikati et al.

2017). However, Schwartz et al. (2010) suggest that political values are the

manifestation of basic values in the political domains and the motivational structure of

basic personal values can be used to organize political values coherently. For example,

social order, also known as law and order in Schwartz's (1992) language, is positively

correlated with security, conformity, and tradition and negatively correlated with self-

direction, universalism, stimulation, and hedonism. Thus, we believe that, not only we

can illuminate the underlying process of consumer reactions towards dehumanization by

using relevant values related to our context, but also we can extend the application of

Schwartz's (1992) personal value theory in studying consumers' political ideology,

especially when we utilize different personal values, i.e., universalism and self-

direction.

2.6.2. Difference in Cognitive Styles between Liberals and Conservatives

Alongside the ideological discrepancy in value prioritization, people on the

opposing side of the political spectrum also differ in the way they process information.

Examining this difference is crucial for understanding how liberals and conservatives process information about services and firms. Two meta-analytic reviews by Jost et al. (2003a) and Jost et al. (2017) show substantial evidence that political conservatives tend to score higher in the scores of psychological variables associated with heuristic and stereotypical thinking style including intolerance of ambiguity, need for cognitive closure, personal need for order and structure, cognitive rigidity, and dogmatism, whereas liberals tend to score higher in the scores of psychological variables associated with systematic and effortful thinking style including integrative complexity, and need for cognition, uncertainty tolerance, and cognitive reflection. Below, we exemplify some of the findings that highlight the difference in cognitive thinking styles.

They analyzed 16 studies that contain the correlation between conservatism and cognitive/perceptual rigidity. Note that operationalization of cognitive and perceptual rigidity mostly involves objective behaviours, such as the tendency to identify and exclude examples from a specific category that are not representative of the category. The positive relationship between conservatism and cognitive/perceptual rigidity is significant in nine studies, and in the other six studies the relationship is statistically insignificant but the trend is as predicted. Furthermore, the average effect size of 16 studies is moderately large ($.32 \leq r \leq .38$). These findings suggest that conservatives – on average – are more closed-minded and dogmatic. Similarly, conservatives also tend to score higher in cognitive closure – that is, a need to have an immediate answer to any question without any confusion or ambiguity – among 41 studies conducted in several countries. The relationship is statistically significant in 32 studies and the average effect size (r) is from .19 to .23. These findings further suggest that conservatives tend to make quicker and more intuitive decisions.

In contrast, liberals are more likely to score higher on the need for cognition scale, which is usually measured with a scale adapted from Cacioppo and Petty (1982) (e.g., "I find satisfaction in deliberating hard and for long hours."). Across 19 studies studying the relationship between political ideology and need for cognition, the effect is significant in 14 studies and insignificant in five studies (although the trend is similar), and the average effect size is from $-.09 \leq r \leq -.16$. Such findings even suggest that liberals might find enjoyment in thinking systematically and deliberately. On the whole, these reviewed findings strongly evidence the positive relationship between conservative (vs. liberal) ideology and the heuristic, stereotypical thinking (vs. systematic, effortful, and deliberate) style (Jost 2017b).

This argument, however, has faced some criticisms. The first problem is related to Jost et al.'s (2003a) finding of a negative correlation between political conservatism and integrative complexity – referred to as the structural complexity of written and spoken communications (i.e., the complexity of thinking) – that are mostly measured using objective content-coding of speeches, decisions, and other forms of text. The findings were challenged by Conway et al. (2016). Conway and colleagues show that the previously identified ideological difference in integrative complexity might be task-dependent. Furthermore, the correlation obtained from previous studies might be due to minor changes in their integrative complexity scales from the established scale (Conway et al. 2018). However, Jost et al. (2017) analyzed a further 26 studies, in addition to the 11 studies in Jost et al. (2003a), that documented the relationship between political ideology and integrative complexity, and show no evidence that conservatives score significantly higher in the integrative complexity scale. By contrast, liberals – on average – tend to score higher with the average effect size (r) ranging from -.19 to -.15. These findings, thus, still largely support the notion that conservatives might use less

complex thinking styles than liberals. Second, from a historical perspective, the ideological asymmetry of dogmatism cannot apply to the left-wing regimes in communist countries (e.g., China, Cuba) and shows that liberals might be as dogmatic and rigid as conservatives (e.g., Eysenck 1955; Greenberg and Jonas 2003). Nevertheless, Jost (2017b) argued that, while historical observation might offer an interesting angle, psychological evidence needs to be presented to draw the conclusion that liberals are as equally dogmatic and rigid as conservatives. Furthermore, recent studies conducted in post-communist countries are consistent with the results found in the West, such that the right-wing ideology is positively associated with the need for order, structure, and closure in Hungary and Poland (Cichocka et al. 2016; De Zavala et al. 2010; Kelemen et al. 2014).

Apart from correlational studies, experimental studies also demonstrated that inducing cognitive load, mental distraction, and other low-effort thoughts promotes conservatism (Eidelman et al. 2012; Hansson et al. 1974; Skitka et al. 2002), indicating the link between conservatism and the heuristic cognitive process. In sum, while there is an on-going debate about the relationship between political ideology and cognitive styles within the political science field, the current evidence suggests that conservatives are more likely to engage in stereotypical and heuristic thinking, whereas liberals are more likely to engage in systematic, effortful and deliberate thinking.

3. HYPOTHESES DEVELOPMENT

In this chapter, we propose our hypotheses based on the extant literature and the practical insights from the exploratory research. We first lay out the general prediction of the interaction between political ideology and dehumanization of service employees. Next, we argue that liberal consumers might be more susceptible to the negative aspect of dehumanization (i.e., surface acting) while conservative consumers might be more susceptible to the positive aspect (i.e., capitalism associations). Finally, we also identify and hypothesize other important moderators that can heighten or weaken the effects of dehumanization. Figure 3 shows the conceptual model of this research.
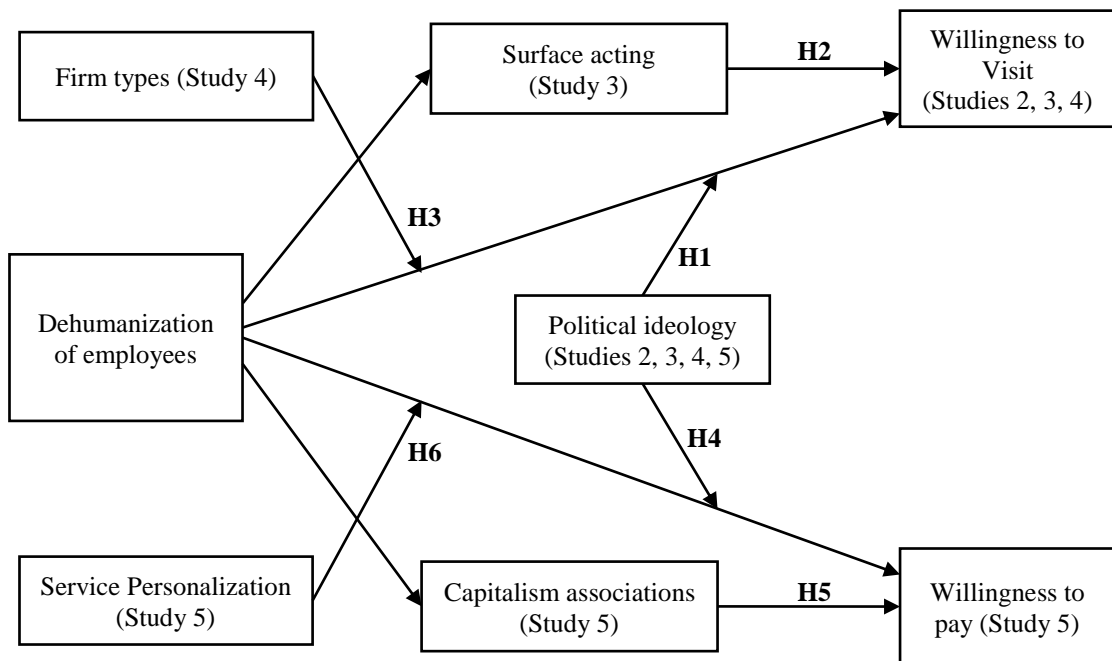
Figure 3. *Conceptual Model of the Dissertation*

3.1. Political Ideology and Dehumanization of Service Employees

As previously discussed, dehumanization has been shown to facilitate immoral and antisocial behaviours (e.g., Leidner et al. 2013; Rudman and Mescher 2012; Viki et

al. 2013) while hindering pro-social behaviours (e.g., Andrighetto et al. 2014; Čehajić et al. 2009). Feeling subtly dehumanized during everyday interactions is also cognitively and emotionally harmful (Bastian and Haslam 2011). Generally, dehumanization carries far-reaching harmful consequences during social interactions (Haslam and Loughnan 2014). Given the general negative sentiment about dehumanization, in general, when observing dehumanization of service employees, third-party consumers should experience negative responses.

Nevertheless, dehumanization might sometimes have functional consequences. People are willing to engage in dehumanization of others, as a psychological tool to make a tough decision that can benefit those they dehumanized (Lammers and Stapel 2011), and as a defensive mechanism to avoid affective and psychological costs such as burnout symptoms and emotional exhaustion, which can be generated from an appreciation of others' humanity (Cameron et al. 2016; Vaes and Muratore 2013). In commercial settings, we argue that dehumanization of service employees can also be functional for a service firm because, through it, the firm can improve productivity and controllability, and ensure service consistency for customers by eliminating "unnecessary", unpredictable, and uncontrollable humanness (Korczynski et al. 2000; Ritzer 1983). This positive aspect of marketplace dehumanization might also influence the expectation and perception of some consumers. Thus, if consumers are prone to the negative aspect of dehumanization of service employees, they should react negatively whereas consumers who are prone to the positive aspect of dehumanization should react positively.

Particularly, we predict that political ideology might regulate consumer responses towards dehumanization of service employees for several reasons. First, as marketplace dehumanization is strongly associated with the capitalist system (Marx 1844; Weber

1930), it is straightforward to conjecture that consumers who are on the opposite side of the political spectrum – and thus, who have different beliefs about the ideal political system (Erikson and Tedin 2003; Jost et al. 2009) – should react differently towards this practice. Second, previous studies also show that political ideology regulates consumer responses to various types of marketing communications including information about firms and products (Ordabayeva and Fernandes 2018; Winterich et al. 2012), ad framing (Kidwell et al. 2013; Kim et al. 2018; Septianto et al. 2019), product labelling (Irmak et al. 2020), and product and brand designs (Angle et al. 2017; Ordabayeva and Fernandes 2018), suggesting the important role of political ideology in shaping consumer reactions towards company strategies and tactics. Third, during the exploratory process, we found that conversation about dehumanization of service employees under relevant news articles (e.g., Boyle et al. 2017; Guendelsberger 2019) can sometimes be politicalized. Some commenters made political remarks about others who hold an opposite view (e.g., "*liberal special snowflakes expect that*", "*Democrats always have to whine about something. They want everything for free!!!*", "*I bet your* [sic] *also a Trump supporter*"). This implies that dehumanization of service employees is a politically polarizing topic which can evoke a strong response from both liberals and conservatives. Note that, in Study 1, we conduct a text-mining study by collecting all comments under the articles we examined, and also past comments made by the commenters to systematically test our predictions. Finally, because conservatives are strongly motivated to justify and rationalize an existing system whereas liberals are strongly motivated to promote social change (Jost and Hunyady 2003; Jost et al. 2003a) and marketplace dehumanization is a component of an existing capitalist system, we predict that, in general, liberals are more susceptible to its negative aspect, whereas conservatives are more susceptible to its positive aspect.

3.2. Negative Aspect of Dehumanization: Mediating Role of Surface Acting

We reason that asking employees to behave like robots should alter a certain aspect of service experience. Built from the service literature, we propose that dehumanization can increase consumers' anticipation of surface acting. Emotional labour literature suggests that service employees employ either deep acting strategy or surface acting strategy to regulate their emotions according to the display requirement (Hennig-Thurau et al. 2006; Hochschild 1983). Deep acting refers to employees' attempts to modify their inner feelings, which then trigger an authentic physiological display, whereas surface acting refers to employees' attempts to only fake the emotions they display to customers without truly altering their inner feelings. When being asked to become human robots, employees must profoundly oppress their true selves as human beings. It is not likely that employees can make themselves genuinely think like robots in order to act like robots (i.e., deep acting). In fact, it is simpler for them to only modify their superficial displays to act and behave like robots without thinking and feeling like robots (i.e., surface acting). Therefore, we argue that dehumanized employees are likely to engage in surface acting. Importantly, service literature suggests that, in general, employees' emotional display is a crucial element of the service experience (Beal et al. 2006; Grandey and Gabriel 2015; Jeong et al. 2019). When customers infer that employees engage in surface acting, their perceptions of the interaction with these employees are greatly impaired, which consequently damages their relationship with the service firms, their satisfaction, and loyalty intention (Grandey et al. 2005; Groth et al. 2009; Hennig-Thurau et al. 2006; Hülsheger and Schewe 2011; Yagil and Medler-Liraz 2017), suggesting that customers are highly

responsive to surface acting. Hence, when knowing that a service firm regards its employees as less than human, anticipation of surface acting effortlessly leaps to the consumer's mind.

The negative influence of dehumanization through surface acting, nevertheless, might differ across the ideological spectrum. According to Schwartz's (1992) circumplex model, 10 basic personal values serve as the guiding principles in life comprising of power, achievement, hedonism, self-direction, stimulation, universalism, benevolence, tradition, conformity, and security (see more detail in section 2.6.1). As previously discussed, liberals tend to prioritize universalism, self-direction, and benevolence whereas conservatives tend to prioritize conformity, tradition, security, and power (Caprara et al. 2006; Devos et al. 2002; Jost et al. 2016; Piurko et al. 2011). Surface acting, especially, strongly conflicts with two particular values, namely *self-direction*, which emphasizes autonomy, independence, and freedom of individuals, and *universalism*, which emphasizes the welfare of all people.

First, emotional regulation strategies (i.e., surface acting, deep acting) are to meet the emotional requirements for employees' roles. Such requirements, by definition, reflect the constraints on employee's autonomy and freedom. Therefore, employees who employ emotional regulation strategies, either surface acting or deep acting, shows lower autonomy of thoughts and of actions than those who do not. Among these two strategies, we argue that surface acting expresses an even lower self-direction value than deep acting. When engaging in deep acting, employees truly attempt to shape their inner feelings and thoughts before displaying those emotions to customers. Hence, this method allows employees to align their own goals and actions with the role requirement. As the feelings and emotions they display to customers truly reflect their own thought and feelings, those emotions appear to be more authentic (Hennig-Thurau

et al. 2006) and consequently, consumers should infer a high degree of autonomy in their actions. In contrast, when engaging in surface acting, employees just try to put on the mask that expressing the right emotions to customers. Therefore, consumers can clearly observe that employees' display emotions are fake and inauthentic (Hennig-Thurau et al. 2006; Hülsheger and Schewe 2011), and thus, that their emotional displays are influenced by external forces. Therefore, surface acting (vs. deep acting vs. no emotional labour) opposes the fundamental principle of self-direction value.

Second, the extant literature repeatedly shows that surface acting leads to emotionally harmful consequences for employees. Particularly, the meta-analysis by Hülsheger and Schewe (2011) shows the strong negative correlation between surface acting and many aspects of employees' well-being including emotional exhaustion ($r =$ .374), depersonalization ($r = .352$), psychological strain ($r = .353$), and psychosomatic complaints ($r = .368$), and job satisfaction ($r = -.274$). Since then, there is even more evidence confirming the relationship between surface acting and these indicators of well-being such as emotional exhaustion (Martínez-Iñigo et al. 2007; Ozcelik 2013; Shanock et al. 2013; Uy et al. 2017; Xanthopoulou et al. 2018; Yagil and Medler-Liraz 2017), and job satisfaction (Bhave and Glomb 2016; Huyghebaert et al. 2018; Szczygiel and Bazińska 2021; Wessel and Steiner 2015), and also other new indicators such as anxiety (Krannitz et al. 2015; Wagner et al. 2014). Such findings suggest that consumers tend to find surface acting is harmful to employees' psychological and mental health, which is strongly opposed to the fundamental principle of universalism (i.e., the welfare of all people). Hence, we argue that liberals react more negatively to surface acting which antagonizes two basic human values, namely universalism and self-direction, both of which liberals are more likely to prioritize than conservatives. Formally:

69

H1. *Dehumanization of service employees leads to a lower willingness to use a service among liberals. The effect is weakened among conservatives.*

H2. *Surface acting mediates the interactive effect of dehumanization and political ideology on willingness to use a service.*

3.3. The Moderating Role of Firm Types

Different service firms typically provide different levels of service interactions. For instance, health centres, restaurants, and schools tend to involve longer, closer, and more direct customer-employee interactions than post offices and bank services (Chase 1978). When consumers expect low (vs. high) interactions with employees, their attitudes towards and perceptions of the employees and the interactions should exert less (vs. more) influence on the overall evaluation of the service (Bearden et al. 1998; Chase 1981; Chase 1978; Yee et al. 2008). Accordingly, in our context, employees' non-human behaviours should also be less (more) likely to affect consumers' evaluation of the service. We therefore argue that the effect of dehumanization of service employees will be less prominent for services from global chains compared to those from independent, family-run firms because the former creates an expectation of low customer-employee interactions compared to the latter, in which employees are expected to interact with customers more closely in an extended period to provide a more tailor-made service experience.

Previous findings show that, compared to a global chain, an independent, family-run firm generally possesses a higher level of authenticity (Kovács et al. 2014) – an important facilitator of human interactions (Cheshin et al. 2018; Côté et al. 2013; Wickham et al. 2016). Similarly, customers tend to see local firms, which are generally

70

independent firms, as kinder and more well-intentioned, and in turn are more likely to form an affective relationship with these firms (Davvetas and Halkias 2019; Ger 1999; Kolbl et al. 2019). These findings indicate that independent firms frequently provide high service interactions for their consumers. In contrast, global firms are generally seen as offering greater functional and utilitarian values (Davvetas and Diamantopoulos 2016; Swoboda et al. 2012), are more competent but colder (Davvetas and Halkias 2019; Kolbl et al. 2019), and also are preferred more by materialistic consumers (Fastoso and González-Jiménez 2020). Collectively, previous findings indicate that service interactions with global service firms (e.g., McDonald's) tend to involve less genuine human interactions, and consumers are more likely to focus on the usefulness of their service. Consequently, we predict that the negative effect of dehumanization on willingness to use a service should be stronger for independent, family-run firms, which typically involve higher service interactions, than global chains. Thus,

> **H3.** *Dehumanization of service employees leads to a lower willingness to use the service of independent, family-run firms. The effect is weakened for global chains.*

3.4.   Positive Aspect of Dehumanization on Willingness to Pay: Mediating Role of Capitalism Associations

Alongside its negative effect on willingness to use a service, we also predict that dehumanization of service employees has a certain positive aspect because of the peculiar and long-standing link between dehumanization and capitalism. Particularly, in this section, we argue that, by signalizing a prototypical capitalist enterprise, dehumanization of service employees can enhance willingness to pay under some conditions as capitalism is generally preferable and heuristically associated with money

(i.e., capitalism associations). Given that conservatives tend to rely on heuristic and stereotypical thinking and have generally positive beliefs about capitalism, we hence predict that the positive effect of dehumanization is stronger for conservatives.

As previously discussed, at the societal level, philosophers and sociologists have long considered the dehumanization of employees (and even consumers) as an inherent part of capitalism (e.g., Blauner 1964; Leidner 1993; Marx 1844; Nussbaum 1995; Ritzer 1983; Thompson 1983; Weber 1930), with two famous analyses from Marx (1844) and Weber (1930). Marx's theory of alienation suggests that capitalism dehumanizes workers under its system by alienating them from their goals, from their ability to act according to their will, and from their human sensibilities. Weber (1930) later argued that the capitalist system necessitates the rationalization process that, in organizational settings, involves the desire to increase efficiency, a specialized division of labour, impersonal rules, and hierarchical order. The rationality, however, is accompanied by irrationality, namely the dehumanization of employees. George Ritzer – a famous Weberian sociologist – in his 1993 essay "The McDonaldization of Society" even uses the service practice of McDonald's to exemplify how the capitalist society is inherently dehumanizing. Given that the long-standing association between dehumanization and capitalism have been thoroughly discussed and popularized by many influential nineteenth- and twentieth-century sociologists and philosophers, such an idea must have become deeply embedded in contemporary Western thinking. Thus, we reason that the dehumanization of employees might signify a typical example of a capitalist firm for consumers in the West. Furthermore, the signalling process keeps being reinforced and promoted with the continuous success of well-known capitalist enterprises such as Amazon and McDonald's that prominently adopt dehumanization of service employees. Importantly, the capitalist market economy, at its core, has

competition as one of the driving forces (Smith 1937). Successful capitalist firms are generally better than their competitors in satisfying consumers by offering superior consumer values (Kotler 2015), such as consistency, and efficiency (Heskett et al. 1994; Lam et al. 2004; Zeithaml 1988; Zeithaml et al. 1996). Prototypical capitalist firms, hence, should be easily stereotyped as competitive and high-quality firms. We refer to these stereotypical characteristics as capitalism associations. In this regard, consumers might react positively towards dehumanization when they are less likely to think systematically and more likely to rely on heuristic cues.

The extant literature suggests that liberals and conservatives tend to adopt different cognitive processing styles (Jost 2017a). Particularly, Jost et al. (2003a) suggest that, because conservatives are strongly motivated to attain order from the chaotic world (i.e., epistemic motives), they are more likely to adopt heuristic and stereotypical thinking to reduce uncertainty and ambiguity. In contrast, liberals, who have lower epistemic motives and who also enjoy thinking more (Jost et al. 2003a; Tam et al. 2008), are more likely to adopt a deliberate and systematic thinking style. The recent meta-analysis study by Jost et al. (2017) illustrates that, across most of the reviewed studies, political conservatism is positively associated with different measures indicating stereotypical thinking including cognitive rigidity, dogmatism, personal need for order and structure, tolerance of ambiguity, and need for cognitive closure while negatively associated with different measures indicating deliberate and systematic thinking including integrative complexity, uncertainty tolerance, cognitive reflection, and need for cognition. Moreover, the reviewed studies in Jost et al. (2017) involve both self-report measures and objective behavioural measures (e.g., cognitive/perceptual rigidity), further strengthening the validity of the finding. Some experimental research also supports the link between conservatism and stereotypical thinking style by showing

that inducing cognitive load, mental distraction, and other low-effort thoughts promotes conservatism (Eidelman et al. 2012; Hansson et al. 1974; Skitka et al. 2002).

Applying the important insight to our research, because conservatives (vs. liberals) are more likely to rely on heuristic and stereotypical thinking, the positive aspect of dehumanization through capitalism associations might be more diagnostic for conservatives. Additionally, the association between conservatism and the tendency to justify the capitalist economy (Jost et al. 2003b; Jost et al. 2003a) also indicates that conservatives – on average – have a more positive attitude towards a typical capitalist firm than liberals.

Given that capitalism is intuitively associated with a money-driven system, or, in Weberian language, the spirit of capitalism is money-making as an end in itself (Weber 1930), we expect that the link between capitalism associations and price-related outcomes (e.g., willingness to pay) is stronger than other outcomes (e.g., willingness to use a service). We focus on willingness to pay – i.e., the amount of money that consumers are willing to spend on a service (Cameron and James 1987) – also because it is an important performance index that is directly related to firms' profitability (Homburg et al. 2005; Koschate-Fischer et al. 2012). Thus, an examination of the effect of dehumanization on willingness to pay is theoretically interesting and managerially important. Additionally, previous studies show that consumers tend to form a heuristic price-quality schema (Peterson and Wilson 1985); such a schema can heighten the positive relationship of the perceived higher quality on willingness to pay a higher price (Steenkamp et al. 2010). These findings further imply the strong relationship between capitalism and price, given that prototypical capitalist firms are generally stereotyped as high-quality firms. Therefore, we expect that dehumanization of service employees increases capitalism associations, which in turn increases willingness to pay for services

among conservatives, who tend to rely on heuristic and stereotypical thinking. The effect should be weakened among liberals, who tend to engage in systematic and deliberate thinking. Formally,

H4. Dehumanization of service employees leads to a higher willingness to pay among conservatives. The effect is weakened among liberals.

H5. Capitalism associations mediate the interactive effect of dehumanization and political ideology on willingness to pay for a service.

3.5.   The Moderating Role of Service Personalization

Since dehumanization of employees reduces the human element in service interactions, one could argue that it is likely that dehumanization is only a part of a standardized (and less personalized) service experience. Thus, it is critical to examine whether service standardization – referring to "a non-varying sequential process, similar to the mass production of goods, in which each step is laid out in order and all outcomes are uniform" (Shostack 1987, p.35) – is distinguishable from dehumanization of service employees. After all, from the service firm's perspective, asking employees to behave like robots and standardizing the service is aimed at achieving the common goal of service production: maximizing efficiency, consistency, and profitability. However, we argue that service standardization and dehumanization of service employees are indeed different aspects of service interaction, especially from the consumer perspective.

From the company perspective, while service standardization emphasizes the process and outcome of service production, especially service outcome (Rust and Huang 2014; Surprenant and Solomon 1987), dehumanization of service employees focuses on the way employees should act and behave during the interactions. Although, in many

cases, standardization and dehumanization are usually reciprocal, the two practices can be applied independently and have distinct effects on consumer outcomes. For example, service firms can ask employees to appear human-like to develop relational values for customers while standardizing the service offerings for increasing efficiency (Huang and Rust 2017). Oppositely, service firms can personalize service (e.g., personalized coffee, customized menu) while asking employees to behave like robots to maintain service consistency and an optimal amount of interaction. At the extremes, even a real service robot or a computer can provide a personalized service offering for the customer. Indeed, as these two characteristics are vital aspects of service interactions, it is important to examine whether different outcomes might emerge from their interaction.

From the consumer perspective, the distinction between the two aspects of service becomes stronger. When consumers perceive dehumanization of service employees, as previously discussed, their focus is on how dehumanization shapes their service interactions by inferring the interactions are with fake robot-like employees and have capitalism associations. When consumers perceive a service as being standardized, their focus is on the service processes and outcomes in relations to other consumers, such that how the service outcome, their service process and experience are mostly uniform and identical to those of others (Huang and Rust 2017; Shostack 1987; Surprenant and Solomon 1987). Therefore, it is hardly straightforward that service standardization can activate the consumers' anticipation of emotion faking from employees. Similarly, it is also less likely that service standardization can signify a prototypical capitalist firm since the association between standardization and capitalism, if it even exists, is less well-known and less well-reinforced since many successful capitalist enterprises (e.g., Amazon) also provide very personalized services using advanced technology (Huang

and Rust 2017). Personalization is even considered an important attribute of many successful service firms nowadays (Heim and Sinha 2005; Huang and Rust 2017; Murthi and Sarkar 2003; Rust and Huang 2014; Wedel and Kannan 2016). These lines of argument, however, should be empirically tested.

In contrast, an interaction with human-robot employees should not always drive consumers to infer a service outcome and process uniformity. For instance, a coffee shop can ask its employees to behave like robots while still try to personalize the service by asking them to write the customer's name on the cup and to customize the ingredients of a cup of coffee. In fact, when a service is personalized, consumers should expect more and longer interactions with employees in order to personalize their services. As such, we expect that, in these circumstances, consumers will pay more attention to their interactions with employees, and consequently the role of dehumanization of service employees should become more prominent. Hence, we expect that personalized services can amplify the positive effect of dehumanization on willingness to pay. In contrast, service standardization should create consumers' expectation of low human interactions, and thus weaken the role of dehumanization of service employees. Furthermore, service standardization might create the perception that all aspects of service, including price, are uniform. Thus,

> *H6. Dehumanization of service employees leads to a higher willingness to pay for*
>
> *personalized services. The effect is weakened for standardized services.*

4.   METHODOLOGY

This chapter will discuss the methodologies used in this research. First, we discuss how we arrive at using quantitative research methods by adopting logical positivism. Second, we provide an overview of the research design of this research. Third, we discuss particular quantitative methods used in this research including text mining and experimental designs. Fourth, we provide an overview of data collection strategies for a text-mining study.

4.1.   Philosophical Foundation

One of the key steps in undertaking scientific research is to use an appropriate methodology. However, to be able to claim knowledge from the research findings, all research methodologies necessitate a set of philosophical assumptions about ontological and epistemological positions (Easterby-Smith et al. 2012). Particularly, we adopt logical positivism as the philosophical foundation for this research. Logical positivism justifies a quantitative methodology that is employed in all of our studies (Halfpenny 1982).

The key ontological assumption of positivism is that there is an external world and only a single objective reality that exist independent of one's perspective (Hudson and Ozanne 1988). Based on this assumption, for positivists, the only way to discover and claim factual knowledge is through observational experience and deductive reasoning (Hunt 1991). Consequently, the positivist approach to scientific research mostly involves the hypothesis development deducted from the literature and theory (i.e., deductive reasoning) and the collecting process of quantifiable data to test the

hypotheses. An important doctrine of logical positivism is the verification principle, which emphasizes that the statement is meaningful only when it can be empirically tested to be true or false (Hanfling 1981). The *logic* component of logical positivism justifies the data analysis process by providing the rationale to break down complex meaningful statements into a set of analytic statements that can be (dis)proved using logic and mathematics (Halfpenny 1982). By applying the verification principle, we can also generalize our scientific findings to a certain extent (Benton and Craib 2010). Nevertheless, the philosophical shortcoming of the verification principle (and thus generalization) is that the future will not always resemble the past (Halfpenny 1982; Hume 1748). For instance, the countless past observations of red roses do not guarantee that the next rose seen is red. Therefore, the strict verification principle is philosophically indefensible and must be relaxed to the weaker form, a confirmation principle (Carnap 1962). In this regard, we acknowledge that our scientific findings must always be reflected upon and updated with new evidence.

In sum, following logical positivism, this research utilizes quantitative research. Particularly, we develop our hypotheses deduced from the extant literature. To test our hypotheses, we use a non-randomized experiment and three randomized experiments—an ideal method in science (Kerlinger 1966)—a modern text-mining study.

4.2. Research Design

Malhotra et al. (2013) classify research design into two main categories, exploratory design and conclusive design. While researchers use exploratory design to uncover the insights of phenomena that are not well-defined and are difficult to quantify, conclusive design, comprising descriptive research and causal research, is

applicable when researchers aim to test hypotheses, and variables of interest are well-defined and quantifiable. Following the philosophy of logical positivism, this research mainly utilizes a conclusive design. Particularly, we conduct *descriptive research*, namely a *large-scale text-mining study*, to examine the real-life relationship between online readers' stance on dehumanization of service employee and their political ideology. We also conduct *causal research* in controlled settings, particularly *quasi-experiments* and *randomized experiments*, to examine the causal effect of dehumanization of service employees and political ideology on consumer responses. In the next sections, we discuss the modern text mining and analysis including its key differences from classic text analysis and key methods in automatic text classification (section 4.3), and causal research in detail, including why experiments are used to establish a causal relationship, the external validity and the internal validity of experimental design, and types of experiments (section 4.4).

4.3.   Text Mining and Text Analysis

Text mining is an emerging methodology that originated from the computer science field and typically involves informational retrieval, data mining, machine learning, and computational linguistics (Ignatow and Mihalcea 2016). It should be underlined that, while text-mining techniques and classical text-analysis techniques (e.g., focus-group, interview), which have been commonly applied in humanity and social science, allow researchers to examine textual data, the two types are largely distinctive regarding philosophical premises, methods, and human and technological involvements. While classic text analysis is often based on interpretivism that emphasizes human interpretations of reality, text mining typically follows the positivist

80

approach (Reed 2011). Following the philosophical positions, classic qualitative text analysis studies (e.g., grounded theory) typically apply inductive logic (i.e., developing theories and propositions from empirical data) whereas quantitative text-analysis and text-mining studies apply deductive logic (i.e., starting with deriving hypotheses from the extant literature and then testing the hypotheses on empirical data). Thus, research findings produced by quantitative text-analysis and text-mining studies and experiments are entirely comparable and justifiable under a positivist paradigm.

One popular approach to text mining is automatic text classification, also known as text categorization, which involves the assignment of texts into different pre-defined categories (Ignatow and Mihalcea 2016). This method is particularly useful when dealing with an enormous amount of textual data that is infeasible for manual classification or when there is a need for real-time text classification (Hartmann et al. 2019). A clear example of its practical application is the automatic detection of email spam. Two pre-defined categories are spam and no-spam. A machine first learns the essential characteristics that constitute each group through different methods and then classifies future incoming emails into the appropriate group. Marketing and consumer behaviour researchers have started to adopt automated text classification across various research topics (e.g., Hartmann et al. 2019; Hennig-Thurau et al. 2015; Huang and Luo 2016; Ordenes et al. 2018; Vermeer et al. 2019).

Automatic text classification includes two main types. First, lexicon-based methods (e.g., WordNet, Linguistic Inquiry and Word Count – LIWC) classify texts by using lexical resources, dictionaries or thesauruses created by experts, which include lists of words or phrases mapped on certain labels (Pennebaker et al. 2015). Second, supervised machine-learning algorithms (e.g., support vector machines, neural network, decision trees) require a set of human-annotated data to train the machine-learning

algorithms which then classify the set of unlabelled texts (Dumais et al. 1998). In general, supervised machine-learning algorithms demonstrate a better performance in text classification tasks than lexicon-based methods (e.g., Hartmann et al. 2019; Kübler et al. 2020). We use a supervised machine-learning algorithm, namely Long Short-Term Memory, in Study 1 to classify online comments. In Chapter 6, we discuss why and how we choose this particular algorithm for this research, before proceeding with the classification and analysis tasks.

4.4. Causal Research

To test the cause-effect relationship between dehumanization and consumer responses, we also undertake causal research (Malhotra and Peterson 2014). According to Hair et al. (2009), to establish the cause-effect relationship between two variables, three conditions must be satisfied. First, an independent variable must be systematically correlated with the dependent variables (Condition 1). Second, the independent variable needs to occur before the dependent variables (Condition 2). Third, no other predictors of dependent variables are present (Condition 3).

Experiments are typically used in causal research as they enable researchers to satisfy those three conditions with a single study. An experiment normally involves at least one independent variable manipulated and dependent variable(s) measured (Tabachnick and Fidell 2007). For example, in the between-subjects design of an experiment, participants are randomly assigned in different conditions of the experiment (i.e., manipulation of the independent variable) and then respond to the measurement of a dependent variable. With this setup, although different participants might have distinctive characteristics that can affect the dependent variable, those characteristics are

held constant across different conditions through participant randomization. In this case, if the dependent variable varies across different conditions, its variance should not be because of those characteristics but because of the variance of the focal independent variable (satisfying Condition 1 and Condition 3). Furthermore, the manipulation of an independent variable always happens before participants' respond to the measurement of a dependent variable, which also satisfies Condition 2 of establishing a causal relationship.

4.4.1. Internal Validity and External Validity

When experimenting, researchers aim (1) to obtain valid results of the proposed effects of the independent variable on dependent variables on a particular population sample, and then (2) to generalize the results to a whole population (Malhotra et al. 2013). To this end, experimental researchers must ensure both internal validity and external validity of their findings (Wortman 1983). In this research, we address the important issues related to both types of validity by using various methods to ensure the quality of our experiments and conducting a text-mining study in a real-life setting.

Internal validity is a fundamental requirement to draw valid conclusions from the research findings, and refers to the accuracy of an experiment. To achieve internal validity, behavioural researchers need to ensure that, apart from a manipulated independent variable, no other variables drive the observed effects on dependent variables. We achieve the internal validity of our findings with different methods. First, we thoroughly design our experiments in a way that minimizes the effect of confounding variables. For instance, we design our manipulations of dehumanization of service employee using a rich body of dehumanization literature to only vary the degree

of dehumanization between two conditions. The text of the dehumanization (vs. non-dehumanization) scenario is kept identical except for the manipulation of the focal independent variable. Additionally, we develop two main types of dehumanization stimuli across three experiments and a quasi-experiment. This enhances our confidence that the findings are independent of a specific manipulation. Second, we include manipulation checks in all the experiments (including a pre-test) to ensure the manipulation works as intended. We also include the measures of potential confounding variables to check whether they might interfere with our experiments. Nevertheless, dehumanization of service employees and standardization of service are inherently correlated: any change in dehumanization is very likely to be followed by a change in standardization. Therefore, another method to ensure internal validity is by manipulating both dehumanization and standardization in one experiment to examine whether the effect of dehumanization fully comes from the shared variance with standardization or not. By empirically showing (and theoretically arguing) that standardization cannot account for the proposed effect in our research context, we are able to rule out this confounding variable. Finally, we apply various standard practices in experimental design including randomization of subjects, absence of experimenters during the experiment, and preventing subjects from retaking the same study.

External validity refers to whether the effect established in the experiments is generalizable to the population of interest (Malhotra et al. 2013). Perhaps the biggest concern about the external validity of an experiment involves the extent to which an effect produced in highly controlled laboratory settings can occur in the real world – in which a variety of other variables can interact and interfere with the focal effect. Similar to internal validity, we also adopt several methods to achieve external validity. First, we replicate our findings in different service contexts (e.g., hotels, coffee shops). Second,

we use samples from different crowdsourcing marketplaces including Amazon

Mechanical Turk (MTurk) and Prolific. Those marketplaces have been shown to be

highly representative of the larger population and are widely used in behavioural

research (Goodman and Paolacci 2017; Palan and Schitter 2018). Third, we conduct

four experiments at different time periods to reduce the effects of external events.

Finally, our experiments are complemented by a large-scale text-mining study using

objective behavioural data. Therefore, we are able to demonstrate a great level of

external validity by showing that the proposed effects found in a highly controlled

environment can also occur in the noisy real-life environment.

4.4.2. Experimental Designs

There are two main randomized experimental designs, namely between-subjects

design and within-subjects design (Rosenthal and Rosnow 2008; Tabachnick and Fidell

2007). Between-subjects design involves a random assignment of each subject into a

single group, among many groups, that is a treatment group(s) or a control group. The

subjects then respond only to the measure of a dependent variable one time. On the

other hand, in within-subjects designs, so-call repeated-measures designs, subjects are

exposed to all conditions of treatment in a sequence. The dependent variables in within-

subjects designs are measured more than one time as, after exposure to each treatment,

participants then respond to the measure of a dependent variable. Although within-

subjects designs are generally more cost-effective due to the lower number of cases

required, between-subjects designs generally have greater internal validity. The first

problem with within-subject designs is that the order of stimuli might interfere with the

proposed effect. People might be more naïve to the first stimulus compared to later

stimuli (Rosenthal and Rosnow 2008). This issue, nevertheless, can be dealt with by the randomization of the stimuli order. The second problem, which is a more serious one, is that, while participants in between-subjects experiments are most unaware of the hypothesis, participants in within-subjects experiments can easily guess the hypothesis and thus can artificially alter their responses to fit their speculation of what the experimenters are trying to achieve (i.e., social desirability biases).Thus, the randomized experiments in this study follow between-subjects designs. Furthermore, we also conduct a quasi-experiment by identifying the particular group that participants belong to prior to the study.

4.5. Data Collection Strategy

As discussed above, we employ various techniques to improve the internal and external validity of the research findings. We also use diverse samples representing the general population in two different countries, namely the United Kingdom and the United States, to further strengthen the validities. In the text-mining study, we collect large-scale real-life data using web scraping. Particularly, after selecting two articles that satisfy our pre-defined conditions (details in Chapter 6), we collect more than 10 million comments on two online news websites, namely Yahoo! News and the Mail Online. Furthermore, we expect that the Yahoo! News readers are mostly American whereas the Mail Online readers are mostly British (details in section 6.1); therefore, we can establish the good generalizability of our findings across countries.

In the three randomized experiments and one quasi-experiment, we use a sample of the general American population recruited via crowdsourcing marketplaces. Particularly, we use Prolific for Study 2 and Study 3 and use Amazon Mechanical Turk

for Study 4 and Study 5. MTurk is the most predominant subject pool among behavioural researchers (Bohannon 2016; Goodman and Paolacci 2017), and Prolific is an emerging sample pool that is dedicated to scientific research (Palan and Schitter 2018) and has recently started to gain popularity in marketing and consumer behaviour research (e.g., Herak et al. 2020; Leung et al. 2018; Reich et al. 2017; Wong et al. 2020). These online subject pools are cheap, reliable, and less time-consuming, but they are also even more representative of the general population than other traditional convenience samples such as student samples (Bohannon 2016; Buhrmester et al. 2016; Crump et al. 2013; Kothe and Ling 2019; Mason and Suri 2012; Paolacci and Chandler 2014). We also design experiments and the survey study using an online survey tool, Qualtrics.

5.   OVERVIEW OF THE STUDIES

To test our hypotheses, we conduct five studies, a large-scale text-mining study (Study 1), a quasi-experiment study (Study 2), and three experiments (Studies 3, 4, and 5). In Study 1, we examine whether liberals and conservatives might react differently in real life when reading about dehumanization of service employees on online news websites. To this end, we collect online comments using web scraping on two news websites, namely Yahoo! News and the Mail Online. In total, we collect millions of online comments that serve as raw unstructured data for measuring readers' online stance on dehumanization and their political ideology. The raw data is then quantified using manual coding and a machine-learning supervised algorithm to generate the final structured dataset for further analysis testing the relationship between these two variables. We expect that Yahoo! News has mostly American readers and the Mail Online has mostly UK readers, Study 1 can thus establish the link between political ideology and dehumanization across different service settings (front-line, back-end) and across different countries (the United Kingdom, the United States), giving us the external validity.

Study 2 directly tests whether liberals and conservatives actually make different choices when presented with dehumanization option vs. non-dehumanization option in a more controlled setting (H1). Study 2 utilizes a coffee shop context. By utilizing the pre-screening function of Prolific, we run a quasi-experiment. Particularly, one half of the samples is participants who pre-identify as conservatives and the other half is participants who pre-identify as liberals on Prolific before engaging in the study. In the study, we ask participants to choose between two coffee shops that follow different

service practices. We explicitly state in the introductions to these two coffee shops that one coffee shop uses a robot-like approach while the other uses a human-like approach.

Next, in Study 3, we manipulate dehumanization using modified scenarios from Study 2 and examine the interactive effect of dehumanization and political ideology on willingness to use a service (H1). Furthermore, this study also investigates the mediating role of surface acting on this effect (H2). Participants are randomly assigned to one of two conditions (dehumanization vs. non-dehumanization). We then measure the willingness to use a service, surface acting, manipulation check, and political ideology.

Study 4 explores whether this causal effect found in the previous study can be replicated in another context, namely hotel service (H1). This study also uses a subtler manipulation of dehumanization to avoid social desirability bias and increase internal validity. We also aim to investigate another important practical moderator, i.e., firm types in this study (H3). Therefore, we manipulate hotel types (an independent, family-run hotel vs. a hotel chain) with short introductory texts about a hotel and dehumanization of service employees (dehumanization vs. non-dehumanization) with code of conduct. The rules in the code of conduct provide subtle cues about dehumanization rather than explicitly stating that a firm dehumanizes its employees. We also pre-test the subtle manipulation in the coffee shop context.

In Study 5, we shift the focus to the positive effect of dehumanization of service employees and aim to test the prediction that, because dehumanization signifies the capitalism associations, it can increase willingness to pay under certain conditions. Particularly, this study investigates whether the positive effect of dehumanization on willingness to pay is stronger for conservatives than for liberals (H4) and whether capitalism associations can explain this effect (H5). This study also aims to provide

89

empirical evidence supporting that standardization cannot exert the similar proposed effects of dehumanization. Moreover, this study ought to examine the moderating role of personalization in this study (H6). Therefore, in this study, we manipulate dehumanization and service standardization by using a modified manipulation of dehumanization from Study 4 and add an additional rule in the code of conduct to manipulate service standardization (vs. service personalization).

6. STUDY 1: LARGE-SCALE TEXT MINING

Recent years have witnessed increasing numbers of online news websites that report on many instances where a service firm (e.g., Amazon, Costa Coffee, Ryanair, Sports Direct) dehumanizes its employees (e.g., Boyle et al. 2017; Butler 2018; Guendelsberger 2019; Leetaru 2019; Mason 2016; Woodcock 2017; Yusuf 2019). Some of these websites allow readers to comment under their articles, which provides an excellent opportunity to study how people react to this practice in real life. Thus, in this study, we aim to examine how people in online settings react to dehumanization by systematically analyzing comments under particular online articles reporting on dehumanization of service employees. Furthermore, we also aim to examine whether the political ideology of the readers influences their expressions under those articles. For these purposes, this study employs web scraping to collect comments at a large scale and then uses text analysis and mining (manual coding, supervised machine-learning algorithm) to transform the unstructured data into structured measures of a stance on dehumanization and political ideology.

6.1. Data Collection Strategy and Methods

We first started with a search for online news articles that meet the following criteria. The first criterion is that the articles must discuss primarily a service practice in which a service firm dehumanizes its employees. The second criterion is that websites that host the articles must allow readers to comment below them. These two criteria are important because they stimulate and also enable the readers to express their stance on dehumanization under the articles. The third criterion is that the websites must make the

comment history of their readers publicly available. This feature is needed to identify the political ideology of the potential subjects of this study. This is because an article that covers controversial political personalities and issues (e.g., Donald Trump) can induce strong polarizing comments from its readers. As text can reflect its producer (Berger et al. 2020), it is reasonable that some of those comments are likely to reflect, at least in part, their readers' political ideology. Because credible news sources frequently upload those articles to generate traffic, we expect that many readers left in their history many political-related comments that, collectively, can accurately indicate the readers' political ideology. Furthermore, compared to users on other platforms (e.g. Twitter, Facebook), news websites' readers remain entirely anonymous (i.e. no personal information is shown except for the comment history). Thus, it is easier for them to express their opinions truthfully and openly, especially when it comes to sensitive political topics.

While plenty of online articles report on dehumanization of service employees (e.g., Heffernan 2020; Mason 2016; Woodcock 2017; Yusuf 2019), we eventually selected two articles that satisfy all pre-defined criteria and also offer a substantial number of comments about dehumanization under the focal articles themselves and in their readers' comment history. This additional criterion is important to ensure a sufficient number of relevant comments after classification. The first article, on the Yahoo! News website, was written by Guendelsberger (2019)[1] on July 18th, 2019 (see Figure 4 for a screenshot of the article). This article reports on the dehumanization of Amazon warehouse workers, in which employees are held to the productivity standards of a robot, monitored rigorously, and isolated. We refer to this article as the *Yahoo article* hereafter. The second article, on the Mail Online's website, was written by Boyle

---

[1] Yahoo temporarily suspended all comment sections from July 23, 2020 – see (Tripathi 2020)

et al. (2017) on December 18th, 2017 (see Figure 5 for a screenshot of the article). This article reports on the dehumanization of Ryanair cabin crews, in which the crews are considered as only a tool for selling products, disregarding employees' emotional needs, and receive unfair and sub-standard wages. We refer to this article as the *Mail article* hereafter. Both Yahoo and Mail articles show visible manifestations of dehumanization of service employees (see details in Appendix G), which can stimulate the discussions of this practice in the comment sections. We arrived at analyzing both articles simultaneously instead of one at a time because of two main reasons. First, while the Yahoo article discusses backline service workers, the Mail article discusses frontline service employees, which enables us to examine the impacts of dehumanization in different service contexts. Furthermore, Yahoo! – despite operating worldwide – is an American web services provider whereas the Mail is a well-known British newspaper. The Yahoo article discusses Amazon employees in Minnesota, US, while the Mail article discusses Ryanair employees in the UK. Therefore, we expect that the Yahoo website targets mostly readers from the United States (US) while the Mail's website targets readers from the United Kingdom (UK). Consequently, using comments under both articles for our study can enhance our confidence to generalize our findings.

Next, we collect all comments under the two selected articles about Amazon and Ryanair's dehumanizing practices. Two independent coders, using the codebook we designed, then manually classify the comments into three categories regarding the stance on dehumanization. Subsequently, to measure political ideology, we accumulate contents in the comment history of the Yahoo and Mail readers who expressed their stances under the focal articles. We then implement state-of-the-art supervised machine-learning models to assign the collected past comments to one of three message types regarding political orientation. The labelled comments ultimately are used for

determining the readers' political ideology. Finally, we examine the relationship

between political ideology and stance on dehumanization using statistical methods.

Figure 6 shows the strategy for data collection and data analysis of this study. In the

next sections, we discuss each step (starting from Step 2) in detail.

Figure 4. *Image of the Yahoo Article*

Figure 5. *Image of the Mail Article*

Step 1 Selection of online news articles	▪ Identify online news articles which (1) report on dehumanization of service employees, (2) allow readers' comments, (3) publish readers' comment history ▪ Two articles selected: (1) a Yahoo! News article about dehumanization of Amazon employees and (2) a Mail Online article about dehumanization of Ryanair cabin crew
Step 2 Generating raw unstructured dataset of a stance on dehumanization	▪ Collect 2,336 Yahoo comments from 1,901 readers and 834 Mail comments from 569 readers and related information (created date, author ID, author name) using web-scraping programing
Step 3 Generate final numeric dataset of the stance on dehumanization	▪ Prepare a codebook that guides the independent coders on how to classify the comments into three groups regarding a stance on dehumanization (oppose, support, and irrelevant) ▪ Two human coders then manually code the collected comments accordingly ▪ Create a dummy variable representing readers' stance on dehumanization (0 = Oppose, 1 = Support)
Step 4 Generating raw unstructured dataset of political ideology	▪ Identify "support" readers and "oppose" readers ▪ Collect the readers' past comments and their associated information in their comment history on those websites: 10,336,854 Yahoo comments and 200,828 Mail comments (e.g., article title, article link, author ID, created date) using web-scraping programing
Step 5 Generate final numeric dataset of political ideology	▪ Select a suitable a supervised machine-learning method (i.e., LSTM) to classify above comments into three groups: right-leaning, left-leaning, and irrelevant ▪ Generate human-annotated data subset (similar to Step 3) for training and testing LSTM models which then classify all remained comments ▪ Create a dummy variable and a continuous variable representing readers' political ideology
Step 6 Analyze the relationship between political ideology and the stance on dehumanization	▪ Merge datasets of the stance on dehumanization (Step 3) and that of political ideology datasets (Step 5) to generate the final dataset for Yahoo readers and for Mail readers ▪ Use suitable statistical methods to assess the relationship between political ideology and the stance on dehumanization

Figure 6. *Step-by-Step Data Collection and Data Analysis Procedure of Study 1*

6.2. Online Response to Dehumanization

We accumulated all publicly available comments on the focal articles posted until May 31st, 2020. In total, we obtained 2,336 comments on the Yahoo article and 834 comments on the Mail article. To operationalize dehumanization, first, we use manual text classification, instead of automatic text classification. This is simply because the numbers of comments under the two focal articles are not considerable, and manual classification can achieve higher accuracy with lower costs and requires a shorter time for the classification task than automatic text classification methods. The latter, on the other hand, is extremely advantageous for a large sample size. Specifically, two human coders manually classified all comments under both articles into three groups regarding the stance on dehumanization (oppose, support, and irrelevant). "Oppose" messages imply a commenter's negative stance on dehumanization, e.g. "*Greed + abuse of technology. Shame on you, Bezo (or bozo?)!*", "*Slave labour! Disgusting practices!*". "Support" messages imply a commenter's positive stance on dehumanization, e.g., "*Then quit*", "*Love Amazon, please just keep doing what they ask you to do.*". The other messages that did not belong to either of the above categories were classified as "irrelevant". A codebook (see Table 5) was provided to the coders as a coding guide. We achieved good inter-coder reliability (Yahoo: Krippendorff's alpha = 89.2%, Mail: Krippendorff's alpha = 83.5%; Hayes and Krippendorff 2007) and the disagreement was settled through discussion.

Question: **What stance on dehumanization is expressed in a comment?**

0. Irrelevant	An irrelevant comment does not show the commenter's stance on the dehumanizing practice. This includes (but is not limited to) comments that are entirely irrelevant, that are too ambiguous, and that reflect commenters' suspicion about information presented in the article. For example: Mail Article: • *"Are there?"* • *"Does not surprise me about Ryanair."* • *"Are there not labour laws in the UK? If so, USE them."* Yahoo Article: • *"Yes they do."* • *"Fake news"* • *"Amazon will just get robots"*
1. Oppose	An oppose comment implies a commenter's negative stance on dehumanizing practice and the firm/service in general. This includes (but is not limited to) comments that call for fighting back, that show empathy for employees, that blame the employer/firm for this practice and other customers for supporting it, and that show a negative attitude towards firms because of dehumanization. For example: Mail Article: • *"MASS STRIKE"* • *"O'Leary* [Ryanair's CEO] *is an abhorrent creature."* • *"This is disgraceful... poor cabin crew!"* • *"Slaves in the sky!"* Yahoo Article: • "*Greed + abuse of technology. Shame on you, Bezo* [Amazon's founder] *(or bozo?)!"* • *"CAPITALISM. Profits over people all the time...*" • *"time to unionize"*
2. Support	A support comment implies the commenter's positive stance on dehumanization and the firm/service in general. This includes (but is not limited to) comments that express a negative tone towards employees, that justify the practice, and express a positive attitude towards the firm/service in general because of dehumanization. For example: Mail Article: • "*Get another job."*

- *"Stop complaining and just do your job."*
- *"Why in this country do we so hate success that we have to criticise every aspect of a successful business."*

Yahoo Article:
- *"Then find another job."*
- *"It's called a job for a reason."*
- "*Love Amazon, please just keep doing what they ask you to do.*"

In total, under the Mail article, there were 136 support comments (16.3%), 213 oppose comments (25.5%), and 485 irrelevant comments (58.2%) among 834 comments posted by 569 different readers (1.47 comments per reader on average). Under the Yahoo article, there were 1267 support comments (54.2%), 180 oppose comments (7.7%) and 889 irrelevant comments (38.1%), among 2,336 comments posted by 1901 unique readers (1.23 comments per reader on average). Figure 7 shows the distributions of each group in each article.
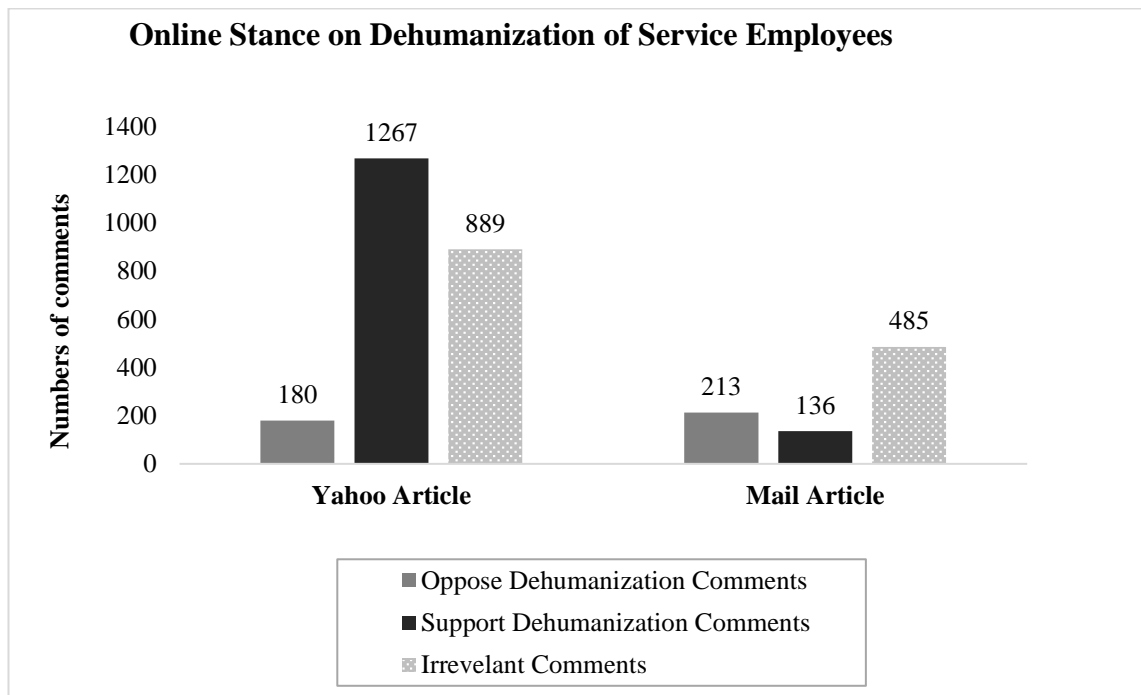
Figure 7. *Numbers of Comments Regarding Stance on Dehumanization on Yahoo and Mail Articles (Study 1)*

To operationalize readers' stance on dehumanization, we compare the numbers of support comments and the numbers of oppose comments to create a dummy variable (0 = oppose dehumanization, 1 = support dehumanization). If a reader has more support (oppose) comments than oppose (support) comments, we assign the reader as a support (oppose) reader. If a reader has only irrelevant comments or the same number of oppose comments and support comments, we assign the reader as an unidentified reader and exclude those from further analysis. Particularly, the Mail article has 119 support readers (20.9%), 186 oppose readers (32.7%), one reader (0.2%) who made one support comment and one oppose comment, and 263 readers (46.2%) who made only irrelevant comments. The Yahoo article has 1,164 support readers (61.23%), 166 oppose readers (8.73%), and 571 readers (30.04%) who made only irrelevant comments. In total, 305 Mail readers and 1,330 Yahoo readers were identified as either oppose readers or support readers.

6.3. Political Ideology

6.3.1. Data Collection Process

To generate data on readers' political ideology, we first collected the publicly available comments of only *oppose* and *justify* readers. This is because we are only interested in the relationship between dehumanization and political ideology and collecting past comments of *unidentified* readers considerably increases unnecessary additional costs and computing powers. Note that the Mail outlet only discloses its users' past comments within one year (from June 19th, 2019) of our collection date (June 18th, 2020). In total, we collected 200,828 comments from 214 Mail

commentators (938 comments per reader on average), comprising 78 out of 119 support

readers (34% of support readers (N = 41) have no comment in their history) and 136 out

of 186 oppose readers (27% of oppose readers (N = 50) have no comment in their

history).

The Yahoo website discloses all its users' past comments since their first-ever

comment on this website. However, we note that, because January 20th, 2017 was of the

date President Elect Donald Trump was scheduled to replace President Barack Obama,

there was a momentous shift in meaning (related to the political orientation of

comments) when people commented about the US president before and after that date

(e.g., "*THANK YOU, Mr. President!*"; "*We have a traitor for president.*"). Therefore,

the unstructured Yahoo dataset on political ideology comprises comments made from

January 21st, 2017 up to our collection date (July 4th, 2020). For the Mail website,

although the premiership of Boris Johnson started on July 24th, 2019, we expect no

major changes in meaning when people commented about the UK prime minister before

and after that day as the current and formal prime ministers are in the same political

party (i.e., the Conservative Party). In total, the final dataset contains 10,336,854

comments from 1215 Yahoo readers (8508 comments per reader on average),

comprising 1,052 out of 1,164 support readers (9.6% of support readers (N = 112) have

no comment during the pre-defined period) and 163 out of 166 oppose readers (1.8% of

oppose readers (N = 3) have no comment during the pre-defined period).

6.3.2. Operationalization of Political Ideology

To operationalize political ideology, for each dataset (Yahoo and Mail), we first

applied a supervised machine-learning model – which is a deep learning-based model

named long short-term memory network (LSTM) – to classify the comments into three categories: *left-leaning*, *right-leaning*, or *irrelevant*. The comments labelled by the machine-learning models then were used to create two measures of readers' political ideology, namely political ideology (dummy) as a dummy variable and liberalism as a continuous variable.

Note that, although classical bag-of-words models (e.g. support vector machine, lexicon-based methods such as LIWC) have been widely applied in consumer research (e.g., Homburg et al. 2015; Ordenes et al. 2018; Vermeer et al. 2019), deep learning-based models (e.g., LSTM) are more suitable in our case because the latter take the syntactic structure of the sentences into account. In general, models that account for syntactic structure outperform the bag-of-words models (e.g., Liu et al. 2019b; Socher et al. 2013), especially when dealing with negation phrases and polarity classification (Wang et al. 2015). In our research setting, syntactic structures are particularly important as people often express their political viewpoints by praising their political affiliation while ridiculing the political opposites (e.g., "*Actually liberal[s] are way better educated than trumpanzees*"; "*Compassion and kindness are very lefty. We need more good old fashioned right wing hatred*"). Without the syntactic structure, it is not possible to identify whether "liberal" or "lefty" is better or worse than "Trump supporter" or "right-wing" in the above examples. Furthermore, because syntactic structures are excluded, the bag-of-words models require sophisticated data pre-process steps (e.g. lemmatization, removing stop words) to function well (Young et al. 2018). In contrast, deep learning networks do not require those steps, which also allows the modelling of complex sentence structures.

It is also noteworthy that in the computer science field, the applications of machine learning for classifying political ideology have been explored (e.g., Chiu and

Hsu 2018; Conover et al. 2011; Fang et al. 2015; Kristensen et al. 2017; Preoţiuc-Pietro et al. 2017; Volkova et al. 2014; Wong et al. 2016). Previous studies focus primarily on the social media sites' users (e.g., Twitter users, Facebook users), whereas our study focuses on the news website's users. Thus, as discussed earlier, because they can remain entirely anonymous, news website's users (vs. social media sides' users) might be more truthful and open when discussing political topics. Furthermore, while those studies tend to utilise both unstructured data (Tweet contents, Facebook posts) and structured data (e.g., like, share, retweet, following, hashtags), we can only utilise unstructured data in this study. Therefore, those studies can apply mostly classical bag-of-words models such as support vector machines, decision trees, Naïve Bayes to achieve good accuracy, we apply the more modern and advanced model in this study. In the next section, the applied model is discussed in detail.

6.3.3. Long Short-Term Memory Network with fastText Word Embedding

Long Short-Term Memory Network (LSTM; Hochreiter and Schmidhuber 1997) is a recurrent neural network (RNN), which is designed to model sequential data (e.g., texts), especially data with long-term dependencies (e.g., long sentences). Thus, we particularly selected LSTM for the classification tasks because many online comments were lengthy and complex. We also incorporated a library of word vectors, called fastText, developed by a Facebook research team (Bojanowski et al. 2017), to pre-train our models (a Yahoo model and a Mail model). Pre-trained word embedding is a form of transfer learning in which the embeddings were trained by an unsupervised neural network beforehand and can be used to improve the performance of other, unrelated,

supervised models with a small training set (Kim 2014). Pre-trained word vectors can significantly improve the text classification performance of neural networks (Collobert et al. 2011; Kim 2014). Because our data on political ideology comprises comments from many different online articles about a wide range of topics on two websites, Yahoo! News and the Mail Online, the deep learning model with (vs. without) reliable pre-trained word embeddings can achieve much higher accuracy with much less human-annotated training data. Furthermore, the main reason that we use fastText out of the many word-embedding resources is because it can outperform other such resources when dealing with morphological word representations (e.g., "*trumpanzee*", "*libtard*"; Bojanowski et al. 2017).

6.3.4. Procedure for Text Classification

To apply LSTM supervised models, two human coders first manually annotated a subset of political ideology data as an input for training and testing the models. Using the training datasets, the machine-learning algorithms then automatically classified all comments in our datasets. We ran two separate models, one for Yahoo comments and one for Ryanair comments, due to the demographical difference (hence, a difference in the political commentary) between the Yahoo readers and the Mail readers.

Since the supervised models need to predict more than 200,000 Mail Online comments and more than 10 million Yahoo comments, and the comments' topics are vastly diverse, the training of the models requires large numbers of human-labelled comments covering a wide range of topics. For this reason, we decided to obtain subsets of 10,000 Mail human-annotated comments ($\approx 5\%$) and 14,500 Yahoo human-annotated comments ($\approx .14\%$). First, two independent coders manually classified a subset of 2,500 Yahoo comments and 2,500 Mail comments into *left-leaning*, *right-leaning*, or *irrelevant* using a pre-defined guideline (Yahoo: Krippendorff's alpha = 83.6%; Mail: Krippendorff's alpha: 86.1%). The coders then discussed the results to reach an agreement and to revise the pre-defined guideline. Using the revised guideline, one coder manually classified the rest of the human-annotated comments. The Yahoo subset contains 3,629 right-leaning comments (25.0%), 2,368 left-leaning comments (16.3%), and 8,503 irrelevant comments (58.6%), and the Mail subset contains 1,727 right-leaning comments (17.3%), 1,175 left-leaning comments (11.8%), and 7,102 irrelevant comments (71.0%).

Table 6 provides the coding book. While many criteria are universal, such as insults towards left-wingers and left-wingers, abortion, climate change, etc., other

criteria need to be directly relevant to the political climates in which the readers are living to improve prediction accuracy. Because the Mail readers are mostly UK-based, they tend to talk about topics related to UK politics such as Boris Johnson, Tory Party, Labour Party, whereas, as the Yahoo readers are mostly US-based, they tend to talk about US politics such as Republican Party, Democratic Party, etc. Note that Donald Trump is a controversial and universal topic so that we use this topic for both Mail readers and Yahoo readers. Furthermore, although we can classify the political orientation of readers' comments using numerous other topics (e.g., then US presidential nominee Joe Biden), we focus on the most common and controversial topics that readers are more likely to discuss during the period of data collection, to improve data density and consequently to improve the models' accuracy. Note that, while a single comment or a stance on a single topic might not always accurately reflect the political ideology of the reader, because readers tend to make comments on various politics-related topics, we believe that comments on a wide range of topics can *collectively* predict readers' political ideology.

One might concern that there is a substantial overlap between the criterion regarding the support/opposition to unions in general and the stance toward dehumanization because one of the ways readers expressed their opposing stance against dehumanization was calling for unionization. First, we hypothesize that there is a relationship between these two variables and consequently the overlap between them should be expected. Furthermore, the overlap should not be a concern if it remains only partial. In this case, supporting/opposing unions is only one of many criteria for classifying the political leaning of comments and calling for unionization is also just one of the ways readers expressed their opposition to dehumanization. In fact, regarding the political ideology datasets, there are only 1.3% political leaning comments

containing the "union" strings (e.g., union, unionization, unionisation, unionising) in the human-annotated political leaning Yahoo dataset (62 right-leaning comments and 16 left-leaning comments) and 9.4% in the human-annotated political leaning Mail dataset (228 right-leaning comments and 44 left-leaning comments). Regarding the dehumanization datasets, comments containing the "union" strings only occupy 2.3% of opposing and supporting dehumanization comments for the Yahoo dataset (22 opposing comments and 11 supporting comments) and also 2.3% for the Mail dataset (8 opposing comments). Finally, we also conducted the same analysis when excluding all comments containing the "union" strings in the dehumanization datasets (Appendix H provides the detailed analysis), and all the findings remain virtually unchanged. Therefore, we believe that while there is a small overlap between two key variables regarding supporting/opposing unions, this overlap is, however, neglectable.

Table 6. *The Coding Guidelines for Text Classification of Political Orientation of Comments*

Platforms	Topics	Left-leaning comments	Right-leaning comments	Irrelevant
Only for comments on Yahoo! News	Republican Party	Oppose/insult the Republican Party and its supporters. For example: "*Lying Republican filth.*"	Support/praise the Republican Party and its supporters. For example: "*Vote REPUBLICAN!*"	Neutral/ambiguous attitude towards the Republican Party and its supporters. For example: "*He is registered as a republican* [sic]....*"*
	Democratic Party	Support/praise the Democratic Party and its supporters. For example: "*Time to elect democrats* [sic] *again to clean up the latest republican* [sic] *mess*"	Oppose/insult the Democratic Party and its supporters. For example: "*Democrats are bad people.*"	Neutral/ambiguous attitude towards the Democratic Party and its supporters. For example: "*Democratic voters.*"
	Gun Control	Support stricter gun control laws and/or prohibition of personal gun ownership. For example: "*guns kill WAY more people than drunk drivers*"	Oppose stricter gun control laws and/or prohibition of personal gun ownership. For example: "*Could that be because GUN CONTROL DOESN'T WORK!?!?!?!!?*"	Neutral/ambiguous attitude towards gun control laws and/or prohibition of personal gun ownership. For example: "*Any mention of lives saved by gun owners*?"
For both comments on Yahoo! News and Mail Online	The right/ conservatives	Insult conservatives/righties. For example: "*another right wing nut with a gun*"	Support/praise conservatives/righties. For example: "*I'm Conservative and am enjoying some edibles in Colorado while visiting. Many Conservatives support it's* [sic] *legalization.*"	Neutral/ambiguous attitude towards conservatives/righties. For example: "*it's* [sic] *government is conservative, dummy*"
	The left/ liberals	Support/praise liberals/lefties. For example: "*actually liberal are way better educated than trumpanzees*"	Insult liberals/ lefties. For example: "*But according to libtards it's not a crisis*", "*another leftist loon*"	Neutral/ambiguous attitude towards liberals/lefties. For example: "*You have to be a liberal...*"
	Donald Trump	Oppose/insult Donald Trump and his supporters. For example: "*Another Trump idiot!*" "*Dump trump* [sic]*!*"	Support/praise Donald Trump and his supporters. For example: "*Excellent. Trump 2020*", "*Get a life you weirdo. He is the best POTUS we ever had.*"	Neutral/ambiguous attitude towards Donald Trump and his supporters. For example: "*Who, Trump*"

Abortion	Support abortion and legalization of abortion. For example: *"My body. My choice."*	Oppose abortion and legalization of abortion. For example: *"A foster home is cruel and yet abortion is not. Typical lib fantasy land."*	Neutral/ambiguous attitude towards abortion and its legalization: *"@just thinking or for THEIR abortions."*
Capital punishment	Oppose capital punishment.	Support capital punishment. For example: *"Death Penalty!"*	Neutral/ambiguous attitude towards capital punishment. For example: *"Correction. A crime spree in the white house* [sic] *should be a death sentence for a "politician.""*
Climate change	Support actions against climate change and/or believe in man-made climate change. For example: *"there is no natural phenomenon that explains the rate of warming"*	Do not believe climate change is man-made and/or oppose/insult climate change activists. For example: *"Climate Change cult using children to promote their lunacy. Sick."*	Neutral/ambiguous attitude towards climate change: *"I blame the asteroid for global warming."*
Feminism	Support/praise feminism.	Oppose/insult feminism. For example: *"Toxic femininity for all to see."*	Neutral/ambiguous attitude towards feminism. For example: *"Only democrat feminist* [sic] *were allowed to vote."*
Privatization	Oppose privatization and/or support nationalization. For example: *"privatization rears it's* [sic] *ugly head AGAIN…"*	Support privatization and oppose nationalization. For example: *"Answer, privatise the BBC."*	Neutral/ambiguous attitude towards privatization. For example: *"Precisely.....Their intention....They WILL Privatise the NHS, come what may..."*
Wealth tax	Support (an increase in) taxing the rich/wealthy. For examples: *"Wealth cap needed. A MAXIMUM wage and MAXIMUM capital."*	Oppose (an increase in) taxing the rich/wealthy. For example: *"You are not going to make the poor rich by making the rich poor, that will never work."*	Neutral/ambiguous attitude towards taxing the rich/wealthy. For example: *"They already Tax the Rich!"*
Union	Support/praise union and unionization. For example: *"I belong to a union, and now I get regular raises. During the 10 years before*	Oppose union and unionization. For example, *"Ah, unions: helping keep useless people employed"*	Neutral/ambiguous attitude towards union and unionization. For examples: *"Unions."*

		we formed the union we got 1 raise. I love my union."		
	Other topics	Not applicable	Not applicable	classify all comments to this label
Only for comments on Mail Online	Boris Johnson	Oppose/insult Boris Johnson and his supporters. For example: *"Boris Johnson, a liar and an incompetent fool*"	Support/praise Boris Johnson and his supporters. For example: *"Well done Boris."*	Neutral/ambiguous attitude towards Boris Johnson and his supporters. For example: *"Boris Johnson did."*
	Tory (Conservative) Party	Oppose/insult the Conservative Party and its supporters. For example: *"That's the Tory ethos for you. We all love expenses cheats and all stick together."*	Support/praise the Conservative Party and its supporters. For example*: "As a life-long Conservative voter of Conservative-voting parents, I can say that we all like this man a lot and wish him every success in his new role!!."*	Neutral/ambiguous attitude towards the Conservative Party and its supporters. For example: *"Tory boy."*
	Jeremy Corbyn*	Support/praise Jeremy Corbyn and his supporters. For example: *"If you trust Corbyn you are a fool."*	Oppose/insult Jeremy Corbyn and his supporters.	Neutral/ambiguous attitude towards Jeremy Corbyn and his supporters. For example: *"Is this woman related to Corbyn."*
	Labour Party	Support/praise the Labour Party and its supporters. For example: *"In other words, the Labour manifesto is largely about the people of the UK"*	Oppose/insult the Labour Party and its supporters. For example: "*Negative sums up the Liebour* [sic] *party*"	Neutral/ambiguous attitude towards the Labour Party and its supporters. For example: *"There is no Labour Party you f idiot."*

Note: **Jeremy Corbyn was the leader of the Labour Party during the data collection period*

In the next step, for the Yahoo dataset, we use the hold-out validation to train the LSTM algorithms, particularly by using 80% of the human-annotated data, and test the accuracy using the remaining 20%. For the Mail dataset, due to the relatively small numbers of left-leaning comments, we use the k-fold (k = 3) cross-validation to stabilize the model predictions while increasing the amount of data for training (Jurafsky 2008; Kohavi 1995; Yadav and Shukla 2016). K-fold is a common cross-validation strategy where the human-annotated dataset is divided into k parts. The model is trained on k-1 parts and validated on the remaining part. The accuracy indexes of the overall model (which we discuss below) are the mean of the indexes in three training and testing sections. Appendix A and Appendix B show the algorithms for training the Yahoo model and Mail model respectively. To determine the accuracy of the LSTM models, we use three conventional metrics: precision, recall, and F_1 (Jurafsky 2008). Particularly, the indexes are calculated as below:

$$\textbf{Precision} = \frac{\text{true positives}}{\text{true positives} + \text{false positives}}$$

$$\textbf{Recall} = \frac{\text{true positives}}{\text{true positives} + \text{false negatives}}$$

$$\textbf{F}_1 = \frac{2 \times \text{Precision} \times \text{Recall}}{\text{Precision} + \text{Recall}}$$

True positives are the numbers of comments that a model predicts as positives (e.g., a model predicts comment X as belonging to category A) which are in fact positives (e.g., the human coder also classifies comment X as belonging to category A). *False positives* are the numbers of comments that a model predicts as positives (e.g., a model predicts comment X as belonging to category A) which are in fact negatives (e.g., the human coder classifies comment X as not belonging to category A). *False*

negatives are the numbers of comments that a model predicts as negatives (e.g., a model predicts comment X as not belonging to category A) which are in fact positives (e.g., the human coder classifies comment X as belonging to category A). Accordingly, *precision* measures the proportion of comments that are correctly assigned to a particular category to comments that are assigned to that category by the model in total. *Recall* measures the proportion of comments that are correctly assigned to a particular category to comments that in fact belong to that category. F_1 measures "a weighted harmonic mean of precision and recall" (Jurafsky 2008, p.66), which also is referred to as model accuracy (Vermeer et al. 2019).

Table 7 shows the indexes of the model validation comprising recall, precision, and F1 scores. In general, the precision, recall, and F_1 scores of all categories are above 50%. The trained models then perform the prediction task to classify the remaining sample of unclassified Mail comments and Yahoo comments.

Table 7. *Long Short-Term Memory Network Political Ideology Classification Results*

Website	Categories	Precision	Recall	F_1
	Right-leaning	.74	.69	.71
Yahoo	Left-leaning	.60	.51	.55
	Irrelevant	.79	.84	.81
	Right-leaning	.63	.52	.57
Mail	Left-leaning	.64	.53	.58
	Irrelevant	.83	.89	.86

6.3.5. Measurement of Political Ideology

The labelled comments from the output from the LSTM models then were used to measure readers' political ideology. The Mail model predicts 3,245 right-leaning comments and 3,323 left-leaning comments. The Yahoo model predicts 453,873 right-

leaning comments and 241,650 left-leaning comments. We operationalize this in two ways, namely political ideology (dummy) and liberalism (scale).

Political Ideology (Dummy)

First, in line with a measure of stance on dehumanization, we create a dummy variable indicating the political ideology of the reader. A reader is assigned as conservative (1) or liberal (0) when he/she has more or less right-leaning comments than left-leaning comments respectively. If a reader only has irrelevant comments or the number of their right-leaning comments is equal to the number of their left-leaning comments, the reader is assigned as unidentifiable (missing value). The final Mail dataset contains 85 liberals and 97 conservatives (N = 182). The final Yahoo dataset contains 382 liberals and 765 conservatives (N = 1,147).

While this method provides a clear and simple measure of political ideology, it faced a problem when there was not much difference in the numbers of left-leaning comments and right-leaning comments. For example, a reader would be classified as liberal if he/she has 31 left-leaning comments and 29 right-leaning comments. However, because any automatic classification method always has certain false positives or false negatives (e.g., assign a comment as left-leaning but it is in fact irrelevant or right-leaning), this could make a major measurement error. Therefore, we create another measure of political ideology in the form of a continuous variable called a liberalism scale.

Liberalism (Scale)

The score of this scale is a proportion of the number of left-leaning comments to the number of politically polarizing comments (a sum of left-leaning and right-leaning

comments) in a reader's comment history. Thus, similar to a self-identified scale (Winterich et al. 2012), this scale shows to what extent a person is a liberal (vs. conservative). The equation is as follows:

$$\text{Score}_{\text{liberalism}} = \frac{n_{\text{left-leaning}}}{n_{\text{right-leaning}} + n_{\text{left-leaning}}}$$

Where $n_{right\text{-}leaning}$ and $n_{left\text{-}leaning}$ are the numbers of right-leaning and left-leaning comments that a reader has made respectively. Similar to the first measure, if a reader only has irrelevant comments, we assign a missing value for this variable. This method can minimize the impact of false positives or false negatives on the measurement. Furthermore, another advantage of the scale over the dummy variable is that we do not exclude moderate readers who have the same number of right-leaning and left-leaning comments. The final Mail dataset contains 192 readers ($M_{\text{liberalism}}$ = .4940, SD = .311) and the final Yahoo dataset contains 1,167 readers ($M_{\text{liberalism}}$ = .4092, SD = .272).

6.4. Analyses and Results

6.4.1. Political Ideology (Dummy Variable)

Yahoo. The chi-square test showed that there was an interaction between political ideology and stance on dehumanization on the Yahoo website (χ^2 = 104.62, *df* = 1, *p* < .001). Particularly among conservative readers, there were significantly more people who expressed support comments than people who expressed oppose comments under the focal article (N_{support} = 720 vs. N_{oppose} = 45, χ^2 = 595.588, *df* = 1, *p* < .001). Among liberal readers, the difference was significantly smaller (N_{support} = 277 vs. N_{oppose} = 105, χ^2 = 77.445, *df* = 1, *p* <.001). Furthermore, among readers who supported

dehumanization, there were significantly more conservatives than liberals ($N_{conservatives}$ = 720 vs. $N_{liberals}$ = 277, χ^2 = 196.840, df = 1, $p < .001$), whereas, among readers who opposed dehumanization, there were significantly more liberals than conservatives ($N_{conservatives}$ = 45 vs. $N_{liberals}$ = 105, χ^2 = 24.00, df = 1, $p < .001$). Figure 8 plots the interaction.
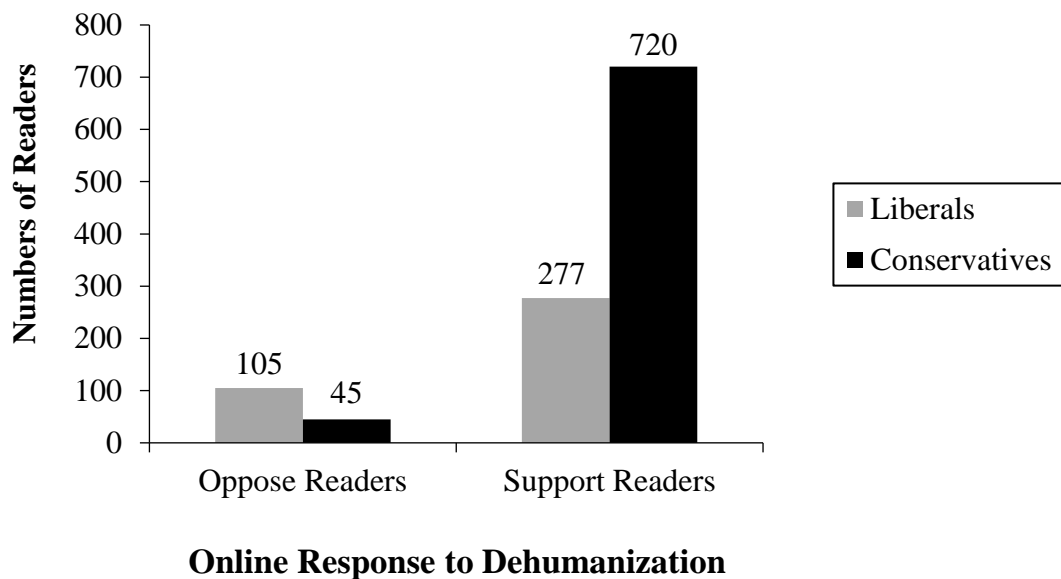
Figure 8. *The Interaction between Readers' Political Ideology and Their Online Response to Amazon's Dehumanization of Service Employees on the Yahoo! New Website (Study 1)*

Mail. The chi-square test also showed that there was an interaction between political ideology and stance on dehumanization on the Mail website (χ^2 = 17.85, df = 1, $p < .001$). Particularly among liberal readers, there were significantly more people who expressed oppose comments than people who expressed support comments under the focal article (N_{oppose} = 67 vs. $N_{support}$ = 18, χ^2 =28.247, df = 1, $p < .001$). Among conservative readers, the number of people who expressed oppose comments was similar to that of people who expressed support comments under the focal article

(N_{oppose} = 47 vs. N_{support} = 50, χ^2 =.093, df = 1, p = .761). Furthermore, among readers who supported dehumanization, there were significantly more conservatives than liberals ($N_{\text{conservatives}}$ = 50 vs. N_{liberals} = 18, χ^2 = 15.059, df = 1, p < .001), whereas, among readers who opposed dehumanization, there were significantly more liberals than conservatives ($N_{\text{conservatives}}$ = 47 vs. N_{liberals} = 67, χ^2 = 3.509, df = 1, p = .06). Figure 9 plots the interaction.
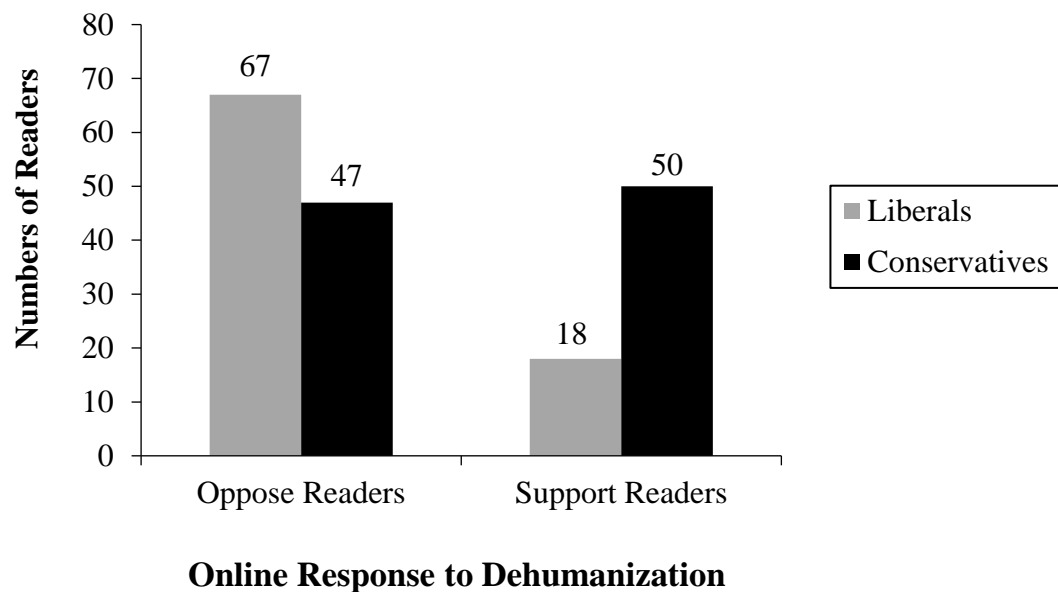
Figure 9. *The Interaction between Readers' Political Ideology and Their Online Response to Ryanair's Dehumanization of Service Employees on the Mail Online Website (Study 1)*

6.4.2. Liberalism (Scale)

We performed the logistic regressions to access the impact of the liberalism scale on the stance on dehumanization. For both Yahoo and Mail datasets, we found a significant correlation between liberalism and an online stance on dehumanization, such that, the more liberal the readers were, the more likely they were to express an oppose

stance on dehumanization (Yahoo: B = -2.983, Wald = 81.3, p < .001; Mail: B = -1.86, Wald = 12.432, p < .001). Table 8 provides details of the findings.

Table 8. *The Relationship between Online Readers' Political Ideology and Their Online Stance on Dehumanization of Service Employees (Study 1)*

Websites	Results		
Yahoo	**Logistic Regression Model with Liberalism (IV) and Online Stance on Dehumanization (DV):** χ^2 = 88.852, df = 1, p <.001, Cox and Snell R^2 = .073, Nagelkerke R^2 = .135 *Liberalism $\rightarrow$ Online Stance on Dehumanization: B = -2.983, Wald = 81.3, p < .001*		
	Political ideology (Dummy)*Dehumanization: χ^2 = 104.62, df = 1, p < .001		
	Stance on dehumanization	**Political ideology (Dummy)**	
		Conservative	Liberal
	Numbers of Oppose Readers	45	105
	Numbers of Support Readers	720	277
Mail	**Logistic Regression Model with Liberalism (IV) and Online Stance on Dehumanization (DV):** χ^2 = 13.577, df = 1, p <.001, Cox and Snell R^2 = .072, Nagelkerke R^2 = .098 Liberalism $\rightarrow$ *Dehumanization: B = -1.86, Wald = 12.432, p < .001*		
	Political ideology (Binary)*Dehumanization: χ^2 = 17.85, df = 1, p < .001		
	Stance on dehumanization	**Political ideology (Dummy)**	
		Conservative	Liberal
	Numbers of Oppose Readers	47	67
	Numbers of Support Readers	50	18

6.5. Discussion

Study 1 provides important preliminary evidence supporting that liberals and conservatives react differently towards dehumanization using unstructured behavioural data. Particularly, we consistently found that liberalism is positively correlated with the oppose stance against dehumanization across the two websites. When using a dummy measure of political ideology, we also found a similar effect: that the liberals' tendency to express oppose (vs. support) comments was significantly higher than that of the conservatives across the two platforms.

117

Notably, the findings using Yahoo comments show that liberals are more likely to express a support stance than an oppose stance on Amazon's dehumanization of employees. This might be because Amazon is perceived as a "Democrat" company (Global Strategy Group 2014); hence, liberals might be highly motivated to support Amazon practices. Nevertheless, we still found that conservative readers have a higher tendency to make support comments than oppose comments, while the effect was weaker among liberal readers, in line with our theorization. Furthermore, on the Mail website, we found that liberal readers had more oppose comments than support comments towards Ryanair's dehumanization of employees, while the numbers of oppose and support comments were similar among conservative readers. These findings further support our theory.

By using real-life behavioural data, Study 1 lends important external validity to our research. However, this study lacks internal validity because it utilizes only correlational data and contains many unaccounted other factors (e.g., Amazon-Democrat link, readers' selection bias) that might operate and interfere with the proposed effects. Particularly, the nature of online interactions is different from offline settings, which might influence readers' responses. For example, while readers' anonymity, as the key characteristic of online interactions on news websites, can increase the authenticity and truthfulness of the discussions, it might also artificially increase polarizing responses.

It is also possible that some findings of this study might be explained by the historical association between the Labour/Democrat Party and their support for certain labour practices (e.g., a higher minimum wage, a high ethical standard of practice). Particularly, as the Mail article heavily focuses on the unfair wage of the cabin crew, this aspect of the article might be the main factor driving a more negative response to

dehumanization among liberal readers than among conservative readers. Nevertheless, the relationship still holds (and even stronger) for the Yahoo article, in which dehumanization is characterized by the robot-like standard, the isolation and monotony of the job, rather than unfair minimum wage. In contrast, the Yahoo article even reports that Amazon even offers "better wages and benefits" than other warehouses.

Another possibility is that as dehumanizing practices of Ryanair's and Amazon's employees in both articles are too explicit, such practices can be classified as unethical practices, which is very unfavourable among liberals simply because of their historic support for the working class. We deal with this concern in Studies 4 and 5 using more implicit forms of dehumanization. Furthermore, we conducted our next studies in more controlled environments and examined the causal effect of dehumanization. Finally, in the next studies, we also use more consequential outcomes (e.g., choice preference, willingness to use service, willingness to pay for service), thereby directly testing our hypotheses.

7. STUDY 2: CHOICE EXPERIMENT

Study 1 provides initial evidence that political ideology defines consumer response to dehumanization of employees. In Study 2, we focus on the front-line service contexts and, by employing a choice experiment, we examine how political ideology affects the preference for a service firm that uses a dehumanization (vs. human) approach (H1). In this study, participants who self-identified as either liberals or conservatives prior to the study were asked to select between two service options (one utilizes dehumanization of service employee and the other does not). We use a coffee shop context in this study.

7.1. Participants, Procedure, and Measures

We invited a hundred and eighty American participants from Prolific to complete the online study. To qualify to participate in our study, participants had to pre-identify their political orientation as either "Liberal" or "Conservative" on Prolific. In total, we recruited 90 conservatives and 90 liberals. Furthermore, to ensure that participants understood American politics and did not just randomly pre-identify as liberals or conservatives, we only included participants that were either born in the United States or were living in the United States at the time of the study. The final sample yielded 174 participants (M_{age}= 35.6, 48% female, political ideology: 84 pre-identified conservatives, 89 pre-identified liberals).

First, participants read a scenario in which they want to go to a coffee shop for coffee. There were two shops nearby that they were considering visiting. They then saw the introductory text for each coffee shop sequentially, which showed that employee

was trained to follow *a robot-like approach* (*vs. a personal approach*). As we

previously argued (Section 2.1.5), when being instructed to behave like robots,

employees are being denied not only their capacity of feeling and having emotions but

also their capacity of thinking and planning as robot-like employees can just follow and

execute the pre-defined scripts. To strengthen the manipulation, we further elaborate on

some two representative aspects of *robot-like approach* (*vs. a personal approach*) in the

introduction, such that employees are instructed to behave in *a strictly formal manner,*

following a specific service script (*vs. very naturally, expressing themselves freely*)

when talking with customers, and *not to display their personal feelings* (vs. *to display*

their personal feelings) when serving customers. While both aspects (i.e. imposing a

strict service script and restraining personal feelings) strongly reflects the denial of

experience/human nature (i.e., interchangeability, denial of feelings), a highly strict

service script also reflects the denial of the capacity of thinking and planning as it

provides the cognitive schema that employees can mindlessly follow (see more detailed

discussion in section 2.3.1).

We kept the professionalism and service quality constant across conditions by

adding "*they are also instructed to be polite, professional, and deliver excellent service*

quality" at the end of both introductions. Furthermore, we offered a visual aid to the

introduction by providing an image of each coffee shop, side-by-side. Figure 10

provides a sample of the stimuli. The order of the texts and the images of the

dehumanization option and non-dehumanization option were both counterbalanced.

Appendix C provides the questionnaire detail.

Participants then indicated which coffee shop they were more likely to visit (Scale

Measure of Choice preference: 1 = Definitely coffee shop A, 7 = Definitely coffee shop

B). We also asked participants to choose either coffee shop A or coffee shop B with a

choice question (Binary Measure of Choice preference: 0 = Coffee shop A, 1 = Coffee shop B). To check whether the descriptions of the two coffee shops varied across dehumanization levels as expected, participants answered "Which coffee shop dehumanizes its employees?" with 1 = Definitely coffee shop A, 7 = Definitely coffee shop B. We also asked participants their political ideology with a single self-identified item (1 = Extremely liberal, 7 = Extremely conservative) from Winterich et al. (2012), and their party affiliation (0 = Democratic Party vs. 1 = Republican Party) from (Han et al. 2019).

Imagine that you want to go to a coffee shop for coffee. There are two coffee shops nearby that you consider visiting (Coffee Shop A and Coffee Shop B). Each coffee shop has a different service approach.

Coffee shop A: Employees of this coffee shop are trained to follow a **robot-like approach**. They are instructed to behave in a **strictly formal manner, following a specific service script** when talking with customers, and **not to display their personal feelings** when serving customers. They are also instructed to be polite, professional and deliver excellent service quality.

Coffee shop B: Employees of this coffee shop are trained to follow a **personal approach**. They are instructed to behave **very naturally, expressing themselves freely** when talking with customers, and **to display their personal feelings** when serving customers if they want to. They are also instructed to be polite, professional and deliver excellent service quality.

The pictures below depict Coffee Shop A and Coffee Shop B:

Coffee Shop A	Coffee Shop B

Figure 10. *The Introduction of the Dehumanization Option (Left) vs. the Non-Dehumanization Option (Right) in Study 2*

7.2. Results

7.2.1. Political Ideology Check

The independent-samples t-test showed that participants who pre-identified as conservative on Prolific also identified themselves as more conservative in our study than those who pre-identified as liberals ($M_{conservative} = 5.68$ vs. $M_{liberal} = 1.81$, $t(171) = -27.69$, $p < .001$). Similarly, the chi-square test showed that significantly more people pre-identifying as conservatives reported being affiliated with the Republican Party ($\chi^2 = 143.18$, $df = 1$, $p < .001$).

7.2.2. Dehumanization Check

The one-sample t-test showed that the mean of the dehumanization scale ($M_{dehumanization} = 6.11$) was significantly higher than mid-point (*mid-point value = 4*, $t = 22.57$, $df = 173$, $p < 0.001$), indicating that people perceive the dehumanization option as more dehumanizing than the non-dehumanization option.

7.2.3. Effect of Political Ideology on Choice Preference

Choice preference (Scale). The independent-samples t-test on willingness to choose showed that people who pre-identified as liberals ($M_{liberal} = 2.03$) were less likely to select the dehumanization option (vs. non-dehumanization option) than conservatives ($M_{conservative} = 2.68$, $t(171) = -2.713$, $p = .007$). Figure 11 plots the effect of political ideology on willingness to choose the dehumanization option.

Choice Preference (Scale Measure)
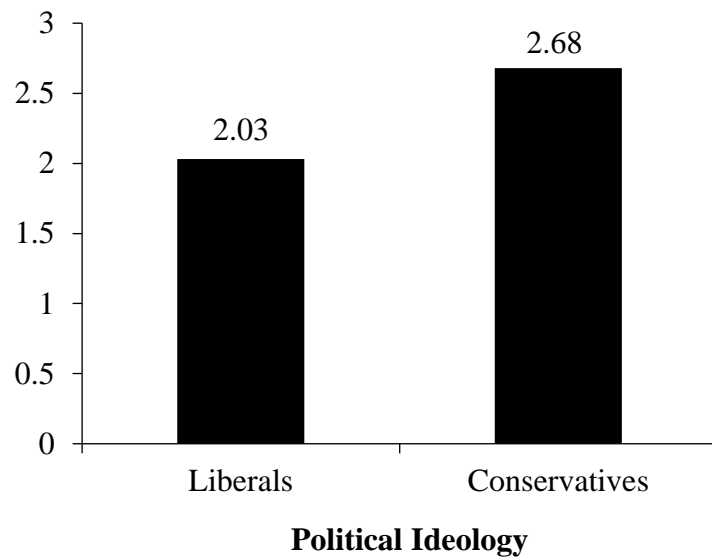
Figure 11. *The Effect of Political Ideology on Choice Preference (Scale) in Study 2.*

Note: *1 is the equivalent of definitely the coffee shop that dehumanizes its employees and 7 is the*

equivalent of definitely the coffee shop that does not dehumanize its employees

Choice preference (Binary). The chi-square test also showed that there was a

significant interaction between political ideology and choice preference ($\chi^2 = 4.273$, $df =$

1, $p = .039$). Particularly among liberals, more people selected non-dehumanization than

selected the dehumanization option ($N_{non\text{-}dehumanization} = 80$ vs. $N_{dehumanization} = 6$, χ^2

$= 63.674$, $df = 1$, $p < .001$). However, among conservatives, the difference in numbers of

people who selected the non-dehumanization option and those who selected

dehumanization was significantly smaller ($N_{non\text{-}dehumanization} = 72$ vs. $N_{dehumanization} = 15$, χ^2

$= 37.345$, $p < .001$). Thus, H1 is supported. Figure 12 plots the effect of political

ideology on choice preference.
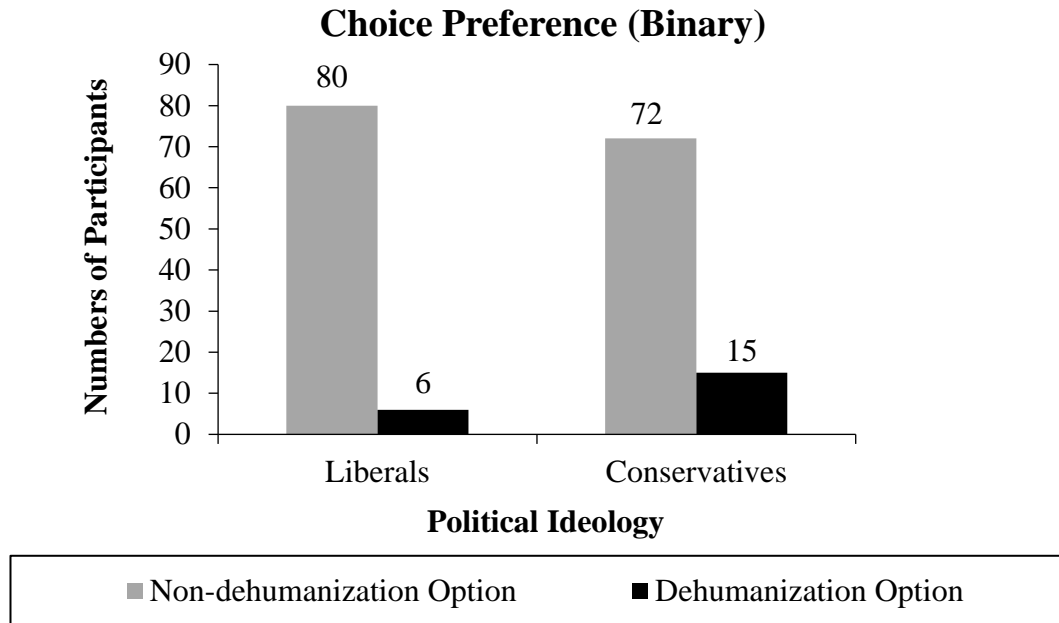
Figure 12. *The Effect of Political Ideology on Choice Preference (Binary) in Study 2*

Robustness check

To check the robustness of the effect of political ideology on choice preference (scale and binary), we tested the correlation between choice and self-identified political ideology. Furthermore, we also tested the relationship between choice preference and party affiliation.

Choice preference (Scale). There was a positive correlation between self-identified political ideology measured in our study and willingness to choose ($r = .144$, $p = .057$). Similarly, the independent-samples t-test comparing willingness to choose scores between Republicans and Democrats showed that people who affiliated themselves with the Democratic Party ($M_{Democrat} = 2.16$) were less likely to select the dehumanization option (vs. non-dehumanization option) than those who affiliated themselves with the Republican Party ($M_{Republican} = 2.57$, $t(172) = -1.715$, $p = .088$).

Choice preference (Binary). There was a positive correlation between self-identified political ideology and choice preference ($r = .136$, $p = .043$). The chi-square

test also showed that there was an insignificant interaction between party affiliation and choice preference ($\chi^2 = 2.093$, $df = 1$, $p = .15$). Nevertheless, the trend is as expected, such that, particularly among Democrats, more people selected the non-dehumanization option than selected the dehumanization option ($N_{\text{non-dehumanization}} = 84$ vs. $N_{\text{dehumanization}} = 8$, $\chi^2 = 62.783$, $df = 1$, $p < .001$). However, among Republicans, the difference in numbers of people who selected the non-dehumanization option and those who selected dehumanization was smaller ($N_{\text{non-dehumanization}} = 69$ vs. $N_{\text{dehumanization}} = 13$, $\chi^2 = 38.244$, $df = 1$, $p < .001$)

7.3.   Discussion

Study 2 further demonstrates evidence for the ideological difference in preferences regarding dehumanization of service employees. Specifically, participants who pre-identify as liberals are less likely to select the dehumanization option (vs. non-dehumanization option) than participants who pre-identify as conservatives (H1). Nevertheless, the findings show that conservatives still choose the non-dehumanization option over the dehumanization option. This could be because an explicit manipulation of dehumanization ("...*follow a robot-like approach*") generated a social desirability bias and this bias is more likely to influence conservatives who tend to conform to the social norms and seek social approval (e.g., Fernandes and Mandel 2014; Jost et al. 2003a; Jost et al. 2008; Kaikati et al. 2017). In the next study, we provide further evidence of the interactive effect of dehumanization and political ideology on the willingness to use a service.

8.   STUDY 3: THE MEDIATING ROLE OF SURFACE ACTING

This study has two objectives. First, we seek to provide causal evidence that dehumanization of service employees influences conservatives and liberals differently. Second, we examine the mediating role of anticipated surface acting. In this study, we manipulate dehumanization (dehumanization vs. non-dehumanization) between-subjects and measure political ideology. Similar to Study 2, this study utilizes the coffee shop context.

8.1.   Participants, Procedure, and Measures

We recruited a total of two hundred seventy-four participants of American nationality from Prolific in return for monetary compensation to complete our Qualtrics survey. Similar to Study 2, we only include participants who were either born in the United States or were living in the United States at the time of our survey. The final sample yields 268 participants (M_{age}= 33.2, 54.5% female). Participants are randomly assigned to either the dehumanization or non-dehumanization condition. We use the same stimuli from Study 2 to manipulate dehumanization, such that, in the dehumanization condition (vs. non-dehumanization) condition, participants read the introduction of a coffee shop that utilizes a robot-like approach (vs. a personal approach). Appendix D provides the detail of Study 3 manipulation and questionnaire.

Willingness to use service. We asked participants to indicate their likelihood to use the service of a coffee shop with two 7-point items: "After reading the information about this coffee shop, how likely are you to visit this coffee shop?", "After reading the

information about this coffee shop, how likely are you to buy coffee from this coffee shop?" (1 = Very unlikely, 7 = Very likely; α = .95).

Surface acting. We then measured surface acting with a 3-item scale adapted from Groth et al. (2009): "the employees in this coffee shop fake the emotions they display to customers", "The employees in this coffee shop put on a 'mask' in order to display the emotions their boss wants them to display", "the employees in this coffee shop show feelings to customers that are different from what they actually feel" (1 = Strongly disagree, 7 = Strongly agree; α = .91).

Manipulation check. Participants answered a 6-item scale of perceived dehumanization of service employees (1 = Strongly disagree, 7 = Strongly agree). The first three items were in the implicit format, comprising two item about experience ("The employees of this coffee shop are instructed not to express emotions", "The employees of this coffee shop are instructed not to express feelings") and one item about agency ("The employees of this coffee shop are instructed not to act on their own intentions") in the mind attribution model (adapted from Kozak et al. 2006). The final three items were in the explicit format ("Employees of this coffee shop will behave like robots", "This coffee shop treats its employees as if they had no free will", "Which coffee shop dehumanizes its employees?"). An exploratory factor analysis (EFA) on all six items of the dehumanization scale revealed that all items were loaded onto one factor, explaining 84% of the total variance. The EFA results in the other experiments (Studies 4 and 5) show similar results. Thus, we used a composite scale of dehumanization for a further manipulation check in this study (α = .96) and the other experimental studies.

As there is a potential overlap between dehumanization manipulation check and surface acting, we also performed EFA with Oblimin with Kaiser Normalization

rotation on six items of dehumanization and three items of surface acting. The EFA revealed that there were two factors extracted from nine items and all items were loaded onto the expected factors with no cross-loadings and with high communalities and loadings. Two factors explained 85% of the total variance. The first factor extracted from six dehumanization check items explained 73% of the variance while the second factor extracted from 3 surface acting items explained 12% of the variance. The finding offers evidence for the discriminant validity of the dehumanization check and surface acting scale.

We also measure a potential confounding variable, namely the perceived competence of employees: "Please indicate your opinions about the employees of this coffee shop you saw in the picture" (1 = Very incompetent, 7 = Very competent).

Political ideology. Participants self-identified their political views (Winterich et al. 2012): "Indicate your political views by choosing one of the following choices…" (1 = Extremely liberal, 7 = Extremely conservative).

8.2. Results

8.2.1. Manipulation Check

The manipulation was successful. The independent-samples t-test showed that participants in the dehumanization condition perceived higher dehumanization of employees than those in the non-dehumanization condition ($M_{\text{non-dehumanization}} = 2.28$ vs. $M_{\text{dehumanization}} = 5.71$, $t(266) = -22.573$, $p < .001$). The t-test also verified that the manipulation did not influence the perceptions of the competence ($M_{\text{non-dehumanization}} = 5.53$ vs. $M_{\text{dehumanization}} = 5.34$, $t(266) = 1.222$, $p = .22$).

8.2.2. The Moderating Effect of Political Ideology

We regressed the willingness to use on dehumanization, political ideology, and their interaction. The two-way interaction between dehumanization and political ideology was statistically significant ($b = .36$, $t = 3.813$, $p < .001$). A simple-slopes test showed that, among liberals (-1SD), dehumanization decreased willingness to visit ($M_{\text{non-dehumanization}} = 6.08$ vs. $M_{\text{dehumanization}} = 3.49$, $b = -2.59$, $t = -10.22$, $p < .001$), and the effect was significantly weaker among conservatives (+1SD; $M_{\text{non-dehumanization}} = 5.67$ vs. $M_{\text{dehumanization}} = 4.45$, $b = -1.22$, $t = -4.82$, $p < .001$). Thus, H1 was supported. Figure 13 further illustrates the interactive effect.
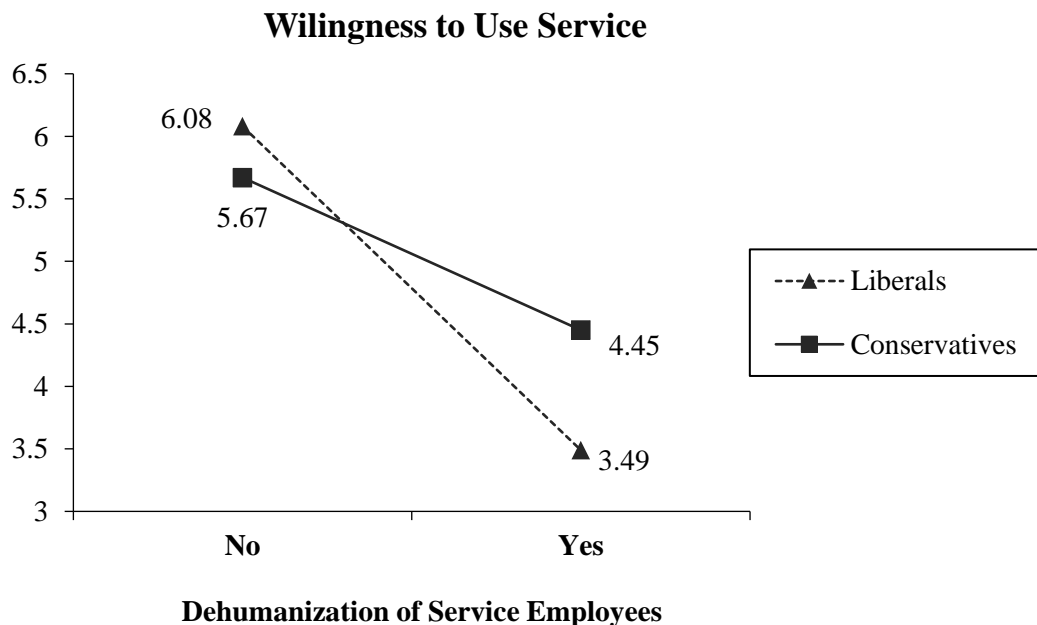
Figure 13. *The Interactive Effect of Dehumanization and Political Ideology on Willingness to Use Service (Study 3)*

8.2.3. The Mediating Role of Surface Acting

To test the mediating role of anticipated surface acting, we run PROCESS model 14 (Hayes 2017) with 5,000 bootstrapped samples and 95% confidence intervals (CIs). We included dehumanization as an independent variable, political ideology as a

moderator, surface acting as a mediator, and willingness to use service as a dependent variable. The analysis revealed that surface acting mediated the interactive effect of dehumanization and political ideology on willingness to use service (Index = .11, 95% CI = [.0118, .2153]). Among liberals, the indirect negative effect of dehumanization on willingness to use service through surface acting was statistically significant (b = -.58, 95% CI = [-.9125, -.2802]), whereas, among conservatives, the effect turned insignificant (b = -.16, 95% CI = [-.5023, .1815]). Particularly, dehumanization increased anticipated surface acting (b = 1.91, t = 11.91, $p < .001$). The effect of surface acting on willingness to use service was then contingent upon political ideology (b = .058, t = 2.03, p = .04). Surface acting reduced willingness to use service among liberals (-1SD, $M_{\text{low surface acting (-1SD)}}$ = 5.25, $M_{\text{high surface acting (+1SD)}}$ = 4.27, b = -.304, t = -3.57, $p <$ .001) but not among conservatives (+1SD, $M_{\text{low surface acting(-1SD)}}$ = 5.18, $M_{\text{high surface acting(+1SD)}}$ = 4.91, b = -.082, t = -.895, p = .37). Thus, H2 was supported. Figure 14 illustrates the moderated mediation model.
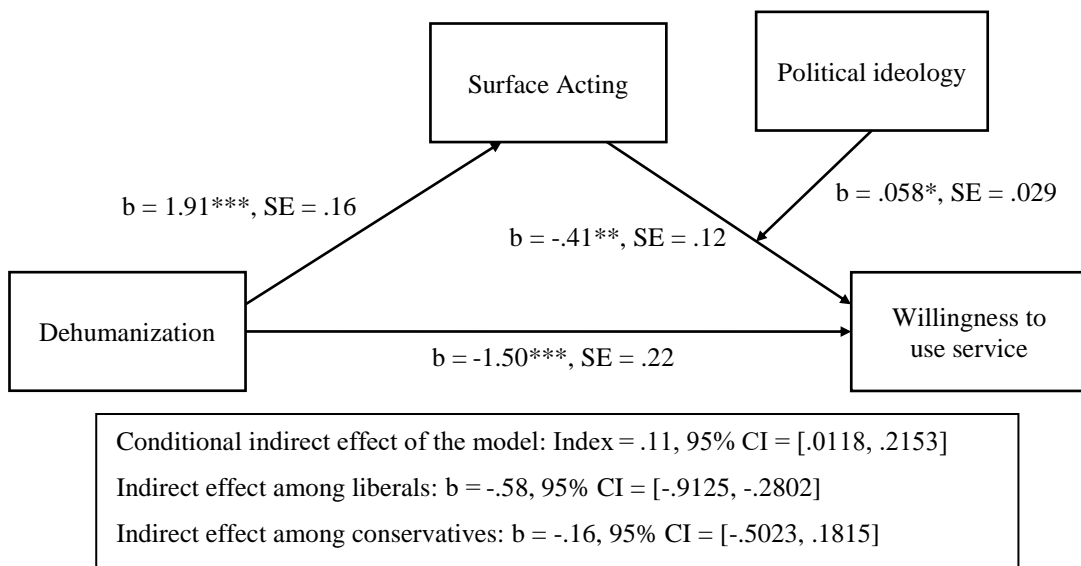
Figure 14. *The Conditional Indirect Effect of Dehumanization and Political Ideology on Willingness to Use Service through Surface Acting (Study 3)*

Note: All coefficients reported above are unstandardized. *p < .05. **p < .01. *** p < .001

8.3.   Discussion

Complementing the choice quasi-experiment (Study 2), this study shows that liberals have a lower willingness to visit a coffee shop that dehumanizes its employees than a coffee shop that does not dehumanize its employee, whereas this effect is significantly weaker among conservatives (H1). While we expect that, among conservatives, willingness to use a service is invariant across dehumanization conditions, this study shows that conservatives also have a lower willingness to use a service. Similar to Study 2, we speculate that the social desirability bias might affect our findings due to the overall negative sentiment about the phrase "robot-like approach" and that conservatives might display the stronger bias due to their tendency for norm conformity and social approval-seeking. We address this issue of Studies 2 and 3 in the following studies by using an implicit manipulation of dehumanization. Study 3 also shows that surface acting mediates the interactive effect, such that dehumanization increases surface acting, which in turn reduces willingness to use service among liberals, but not among conservatives.

9.   STUDY 4: THE ROLE OF FIRM TYPES

Study 4 has three objectives. First, to generalize the causal effect established in Study 3, we aim to replicate the effect in another context (i.e., hotel) using a subtler manipulation of dehumanization (H1). Second, we also aim to test the moderating role of firm types (a chain vs. an independent firm; H3). Third, we aim to examine whether liberals might feel more empathy towards the dehumanized employees compared to conservatives. In this study, we use a 2 (dehumanization of service employees: yes vs. no) × 2 (firm types: global chain vs. independent firm) between-subjects design and measures political ideology.

9.1.   Participants and Procedure

We recruited three hundred and ninety-eight participants (40% female) from Amazon Mechanical Turk who completed the online Qualtrics study. With regard to age, 8.8% of the sample were 18-24 years old, 50% were 25-34 years old, 23.9% were 35-44 years old, 10.3% were 45-54 years old, and 7% were above 54 years old.

Manipulation of firm types. Participants were randomly assigned to one of two conditions relating to types of hotel. In *the independent* [*the chain*] *hotel* condition, we instructed participants to read some introductory information about *the independent* [*the chain*] *hotel*. The details of the two were identical (e.g., deliver a truly great service, offer excellent amenities), except for the hotel designations (*the independent hotel vs. the chain hotel*). Because customers might expect a different price between the two types of hotel, we also kept the price constant by adding an average price (i.e., $230) in

both conditions. After reading their assigned introduction, participants then engaged in the manipulation of dehumanization.

Manipulation of dehumanization of service employees. Participants were then randomly assigned to one of two dehumanization conditions. To manipulate the subtle dehumanization of service employees, we utilized the Code of Conduct with Customers (CCC) showing how employees of a hotel should behave, interact, and appear to the customers. While one version of the CCC provides cues about dehumanization (e.g., *sticking to a step-by-step guideline, always wear their uniform*), the other version does not (e.g., *showing their professional self, can wear their own clothes).* In addition to the CCCs' practical basis, to reflect our bi-dimensional definition of dehumanization of service employees, we designed our manipulations also based upon the psychology literature, consisting of the dehumanization theories (Gray et al. 2007; Haslam and Loughnan 2014), subtle dehumanizing treatments (Bastian and Haslam 2011), and sociology literature (Ritzer 1983). Particularly, wearing a homogeneous uniform, putting on a number tag, and not being allowed to express personal preferences and tastes (denial of experience/human nature: deindividualization), strictly following a predefined service script (denial of experience/human nature: interchangeability, and denial of agency/human uniqueness: capacity of thinking and planning), not allowed to deal with service failure (denial of agency: capacity of thinking and planning), and not supposed to show personal feelings (denial of experience/human nature: emotionality) all imply that a firm only sees its employees as relatively mindless and emotionless robots (Ashforth and Fried 1988; Haque and Waytz 2012; Haslam 2006). Figure 15 shows the CCC used in each condition of dehumanization. Appendix E provides the study detail.

We also pre-tested the subtle manipulation of dehumanization in the coffee shop context. Particularly, we recruited 180 MTurk participants (42% female) to rate the CCC of a coffee shop on the 6-item dehumanization scale (similar to the manipulation check in the main study, $\alpha = .95$). The result verified that the dehumanizing CCC led to participants' higher perception of the dehumanization of service employee than the non-dehumanizing CCC ($M_{dehumanization} = 5.30$ vs. $M_{non-dehumanization} = 4.53$, $t(178) = -3.327$, $p < .01$). Furthermore, it also verified that the dehumanizing CCC did not affect perceptions of the CCC's clarity ($p = .19$, 1 = "very unclear" to 7 = "very clear") and structuredness ($p = .32$, 1 = "very unstructured" to 7 = "very structured").

Dehumanization condition	Non-Dehumanization condition

INTERNAL CODE OF CONDUCT WITH CUSTOMERS

1. Employees should ensure customer satisfaction by **sticking to a step-by-step guideline** when serving customers.
2. Employees **are not supposed** to show their **personal feelings** to the customers.
3. Employees **must not** express their personal preferences and tastes to customer when recommending products and services.
4. Employees **must always** wear their **uniform**.
5. Employees **must always** put on their **assigned number tag**.
6. When any problem arises from service encounter, employees **must not deal** with the problem by themselves but referring to the hotel manager.

INTERNAL CODE OF CONDUCT WITH CUSTOMERS

1. Employees should ensure customer satisfaction by **showing their professional self** when serving customers.
2. Employees **are free to** show their **personal feelings** to the customers, if this could help customer experience.
3. Employees **are free to express** their personal preferences and tastes when recommending products and services.
4. Employees **can** wear their **own clothes**.
5. Employees **can** put on their **name tag**.
6. When any problem arises from service encounter, employees **can try to deal** with the problem by themselves and if not they can refer to the hotel manager.

Figure 15. *Dehumanization Manipulation of Study 4.*

9.2. Measures

After engaging in the reading task, participants were asked to respond to the following measures in sequence.

Willingness to stay. We asked participants to indicate their likelihood to stay at the hotel with a single 7-point item (1 = Very unlikely, 7 = Very likely).

Empathic concern. We asked participants to indicate to what extent did they feel sympathetic/compassionate/moved toward the employees of the coffee shop (adapted from Batson et al. 2007, α = .86)

Dehumanization of employees (manipulation check). We measured firms' dehumanization of employees with the six items from Study 3 with minor adaptation to fit the hotel context (e.g., "The employees of this hotel are dehumanized."; α = .96). An exploratory factor analysis (EFA) on all six items of the dehumanization scale revealed that all items were loaded onto one factor, explaining 83.3% of the total variance.

Political ideology. We measured political ideology using the validated single item (1 = Extremely liberal, 9 = Extremely conservative) from Study 3.

9.3. Result

9.3.1. Manipulation Check

 An independent-samples t-test revealed that participants in the dehumanization condition perceived higher dehumanization of employees by the hotel than those in the non-dehumanization condition ($M_{\text{dehumanization}}$ = 5.08 vs. $M_{\text{non-dehumanization}}$ = 2.78, $t(396)$ = -14.04, $p < .001$), indicating that the manipulation was successful.

9.3.2. The Moderating Effect of Political Ideology

The two-way interaction between dehumanization and political ideology was statistically significant ($b = .103$, $t = 1.98$, $p = .048$). A simple-slopes test showed that, for liberals (-1SD), dehumanization decreased willingness to stay ($M_{\text{non-dehumanization}} = 5.25$ vs. $M_{\text{dehumanization}} = 4.77$, $b = -.48$, $t = -2.44$, $p = .015$) while, among conservatives (+1SD), the effect turned insignificant ($M_{\text{non-dehumanization}} = 5.28$ vs. $M_{\text{dehumanization}} = 5.35$, $b = .07$, $t = .37$, $p = .71$). Figure 16 further illustrates the interactive effect. A floodlight analysis further revealed that participants whose political ideology scores were 3.96 or below were less likely to stay at the dehumanizing hotel than at the non-dehumanizing hotel ($b = -.27$, SE $= .14$, $p = .05$). Thus, H1 was supported.
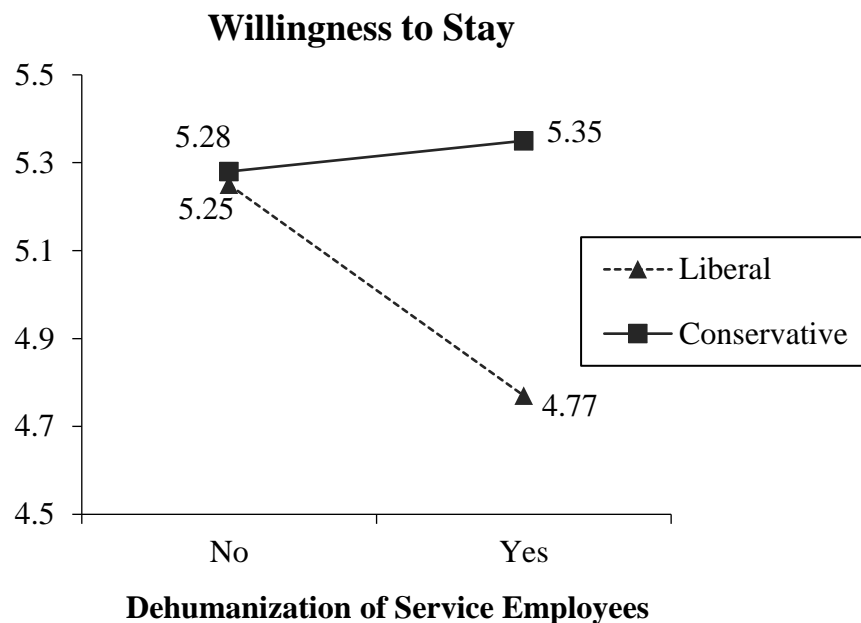
Figure 16. *The Interactive Effect of Dehumanization and Political Ideology on Willingness to Use the Service (Study 4)*

9.3.3. The Role of Empathic Concern

We regressed the empathic concern on dehumanization, political ideology, and their interaction. The two-way interaction between dehumanization and political ideology was statistically insignificant ($b = -.03$, $t = -.592$, $p = .55$). Furthermore, we tested whether empathic concern mediated the effect of dehumanization, political ideology on willingness to using PROCESS model 7. Similarly, the finding revealed that empathic concern did not mediate the interactive effect (Index $= -.0063$, 95% CI = [-.0285, .0170]).

9.3.4. The Moderating Effect of Firm Types

A two-way ANOVA revealed a significant interaction between dehumanization and firm types ($F(1, 394) = 2.91$, $p = .089$). Follow-up simple contrasts revealed that, in the independent firm condition, dehumanization decreased willingness to stay ($M_{\text{non-dehumanization}} = 5.37$ vs. $M_{\text{dehumanization}} = 4.96$, $F(1, 394) = 4.40$, $p = .037$), while, in the global chain condition, willingness to stay was similar across dehumanization conditions ($M_{\text{non-dehumanization}} = 5.16$ vs. $M_{\text{dehumanization}} = 5.22$, $F(1, 394) = .106$, $p = .75$). Thus, H3 was supported. The graph in Figure 17 further illustrates the interaction.

Willingness to Stay
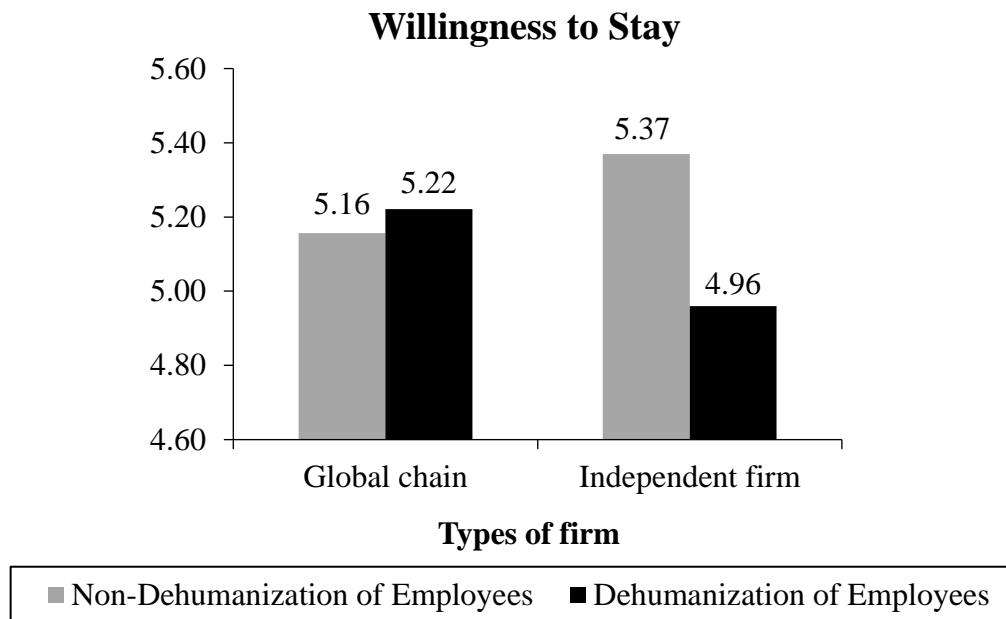
Figure 17. *The Interactive Effect of Dehumanization and Types of Firm on Willingness to Use the Service (Study 4)*

9.3.5. Post-Hoc Analysis

We also conducted a post-hoc analysis of the three-way interaction between dehumanization, political ideology, and hotel types. While the effect was insignificant ($b = .15$, $t = 1.462$, $p = .145$), there was a clear difference in the pattern of the interactive effect of dehumanization and political ideology between the two types of firms. Therefore, we conducted a further post-hoc test for the interactive effect of dehumanization and political ideology for each type of firm.

Particularly in a global chain condition, the two-way interaction of dehumanization and political ideology was statistically insignificant ($b = .013$, $t = .178$, $F(1, 193) = .032$, $p = .86$). Specifically, willingness to stay was similar across dehumanization conditions among both liberals (-1SD; $M_{\text{non-dehumanization}} = 5.02$ vs. $M_{\text{dehumanization}} = 5.01$, $b = -.01$, $t = -.038$, $p = .97$) and conservatives (+1SD; $M_{\text{non-dehumanization}} = 5.33$ vs. $M_{\text{dehumanization}} = 5.39$, $b = .06$, $t = .21$, $p = .83$). In contrast, in the

independent hotel condition, the two-way interaction of dehumanization and political ideology was statistically significant ($b = .17$, $t = 2.24$, $F(1, 197) = 5.02$, $p = .026$). Specifically, dehumanization decreased willingness to stay among liberals (-1SD; $M_{\text{non-dehumanization}} = 5.47$ vs. $M_{\text{dehumanization}} = 4.58$, $b = -.88$, $t = -3.063$, $p < .01$) while, among conservatives (+1SD), the effect turned insignificant ($M_{\text{non-dehumanization}} = 5.26$ vs. $M_{\text{dehumanization}} = 5.29$, $b = .03$, $t = .11$, $p = .91$). The graphs in Figure 18 plot the two-way interactions of dehumanization and political ideology in each condition of firm type.
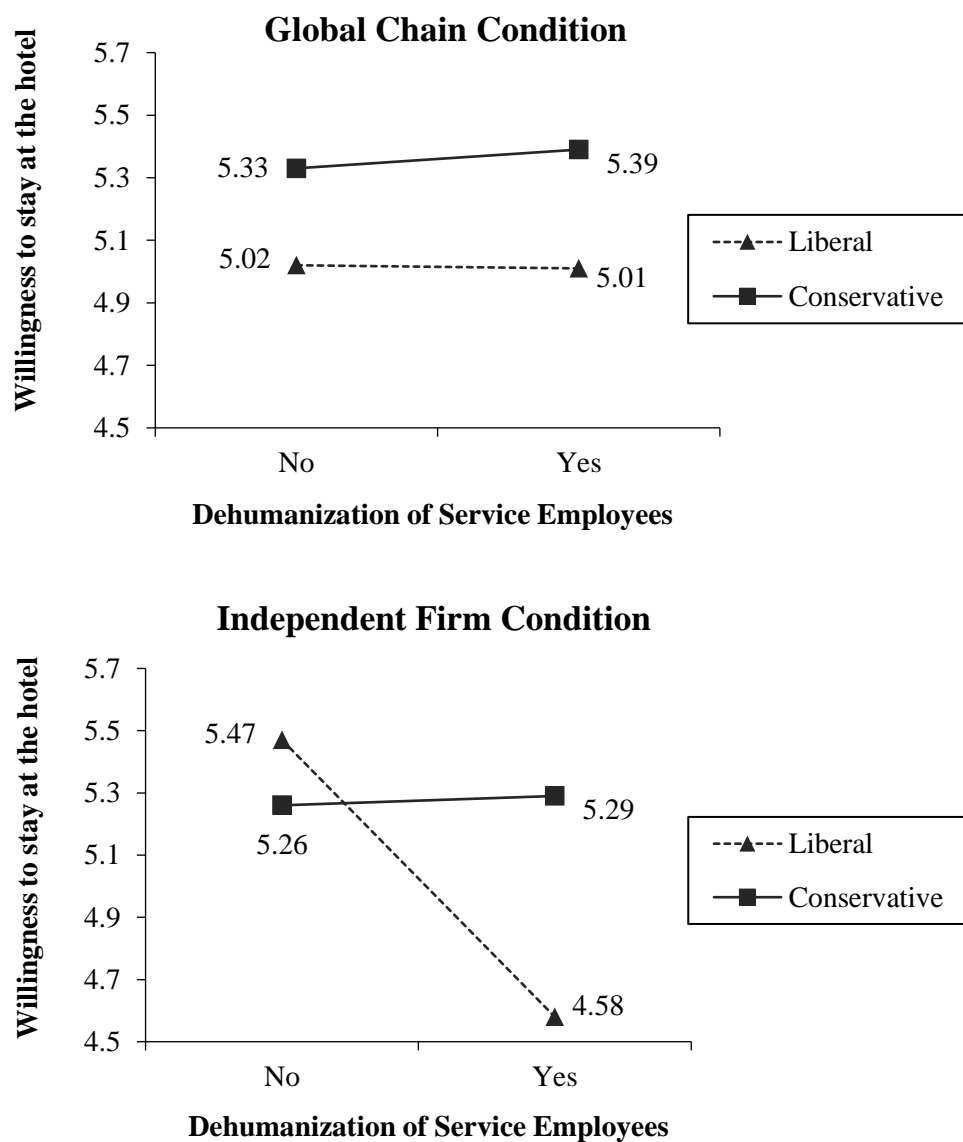
Figure 18. *Two-Way Interaction of Dehumanization and Political Ideology in Global Chain and Independent Firm Conditions (Study 4)*

9.4. Discussion

Study 4 shows further evidence that liberals and conservatives have different reactions towards dehumanization in another service context. Particularly, this study addresses the social desirability bias in Studies 2 and 3 by using the CCC to provide a subtle cue about dehumanization. The findings show that dehumanization of service employees reduces the willingness to stay at the hotel among liberals but not among conservatives (H1). Furthermore, dehumanization also reduces the willingness to visit an independent, family-run firm but not a global chain (H3). The post-hoc analysis further demonstrates that dehumanization reduces consumers' willingness to visit an independent hotel among liberals but not among conservatives. However, dehumanization does not influence the willingness to visit a chain hotel, regardless of consumers' political ideology. The findings further confirm our argument that the effect of dehumanization is more prominent for a service that contains high human interactions.

Study 4 also provide evidence that the association between liberals and their historic opposition to unethical labour practices cannot fully explain our findings. Particularly, the findings still hold even when we use an implicit form of dehumanization, which is unlikely to be considered an unethical practice. Furthermore, if dehumanization were perceived as an unethical practice, liberals would show more empathic concerns toward the dehumanizing employees. However, the findings of Study 4 indicated that this was not the case. We will come back to this issue in the general discussion.

10.   STUDY 5. WILLINGNESS TO PAY: THE MEDIATING ROLE OF CAPITALISM ASSOCIATIONS AND THE INTERACTION WITH PERSONALIZATION

Previous studies provide evidence for the negative aspect of dehumanization on willingness to use, through surface acting. However, we also argue that dehumanization of service employees might have a positive side related to its long-standing relationship with a capitalist system. Also, because of the heuristic association between capitalism and money, we expect that, by signifying a prototypical capitalist firm, dehumanization can actually increase willingness to pay. This study empirically investigates the positive aspect of dehumanization. Particularly, we examine the interactive effect of dehumanization and political ideology on willingness to pay (H4) and whether capitalism associations mediate the interactive effect (H5).

Moreover, this study also aims to empirically test the distinction between dehumanization of service employees and service standardization. To this end, we manipulate dehumanization (vs. non-dehumanization) and service standardization (vs. personalization). If our theoretical argument is correct, the results should show that standardization has an insignificant effect on (1) capitalism associations and (2) surface acting, and consequently (3) produces similar reactions for liberals and conservatives. We also aim to examine the moderating role of personalization in this study (H6).

Finally, this study also tests a possible alternative explanation such that tolerance of ambiguity might explain the interactive effect of dehumanization and political ideology. Particularly, dehumanization of service employees can increase service consistency by reducing the unpredictability of humanness during service interactions, which then can reduce service uncertainty and ambiguity. Therefore, conservatives, who

143

are less tolerant of uncertainty and ambiguity than liberals (Jost 2017a; Jost et al. 2003a) might have a less negative reaction towards dehumanization. If it is the case, the consistency of the service should mediate the interactive effect of dehumanization and political ideology. We test this possibility in this study.

10.1. Procedure and Measurement

In this study, we used a 2 (dehumanization of service employees: yes vs. no) × 2 (service standardization vs. service personalization) between-subjects design and measured political ideology. The study also utilized a coffee shop context. Three hundred and ninety-six participants (M_{age} = 36.7., 36% female) from Amazon Mechanical Turk successfully completed the online Qualtrics study for monetary compensation.

We instructed participants to read the code of conduct of a coffee shop. We used the code of conduct to manipulate dehumanization of service employees (yes vs. no) and service standardization (vs. personalization). Particularly, manipulation of dehumanization was identical to Study 4, with minor changes to adapt from a hotel context to a coffee shop context. To manipulate service style, we added an additional rule at the end of the CCC. Particularly, in the *standardization* [*personalization*] condition, participants read that employees must deliver a *standardized service for all customers* [*personalized service for each customer*]. The graphs in Figure 19 show the four versions of the CCC used for the manipulation task. After the reading task, participants were instructed to respond to the following measures.

Willingness to pay. Participants answered the question "How much would you be willing to pay for a cup of coffee at this coffee shop?" by writing down the price in US

dollars. Note that some participants provided an unrealistic price for a cup of coffee (e.g., $100, $50, $30). As such, the mean of price was $7.73, while the average price for a cup of coffee in the US seems to range from $2.5 to $4 (e.g., McCarthy 2018; Rosenfeld 2021; Settembre 2019; Square 2015). Therefore, we only included participants who indicated a price equal to or smaller than $15 (N = 358, M_{price} = $3.75) because $15 for a cup of coffee is not too unrealistic (Mclaughlin 2016; Rosner and Rosenbaum 2017), the mean of price falls between the realistic $2.5 to $4 range.

Capitalism associations. We then measured capitalism associations with a two-item scale: "this coffee shop represents a typical capitalist enterprise." (1 = Strongly disagree, 7 = Strongly agree), "to what extent does this coffee shop fit the common stereotypes for a firm in the capitalist system?" (1 = Does not fit the stereotypes at all, 7 = Totally fits the stereotypes; α = .87).

Surface acting. We measured surface acting with a scale from Study 3 (e.g., "The employees in this coffee shop fake the emotions they display to me."; 1 = Strongly disagree, 7 = Strongly agree; α = .92).

Service consistency. We measured service consistency with a two-item scale: "I could visit this coffee shop at many different times and I would still receive the same level of service quality each time", "It really doesn't matter which employees in this coffee shop I would interact with; I would receive the same level of service quality" (1 = Strongly disagree, 7 = Strongly agree, α = .76).

Dehumanization of employees (manipulation check). We measured firms' dehumanization of employees with the six items adapted from Study 3 (e.g., "The employees of this coffee shop are dehumanized."; α = .97). Similar to previous studies, an exploratory factor analysis (EFA) on all six items of the dehumanization scale

revealed that all items were loaded onto one factor, explaining 86.9% of the total variance.

Standardization of employee (manipulation check). We measured standardization levels with two items: "The service I would get in this coffee shop is…" (1 = The same as it is for other customers, 7 = Personalized for me), and "The employees of this coffee shop are instructed to deliver a …" (1 = Personalized service for each customer, 7 = Standardized service for all customers; α = .64).

Political ideology. We also asked participants their political ideology with a single self-identified item (1 = Extremely liberal, 7 = Extremely conservative) and their party affiliation (0 = Democratic Party vs. 1 = Republican Party) from Study 2.

Dehumanization and Service Standardization

CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction **by sticking to step-by-step guidelines** when serving customers.

2 Employees **are not supposed** to show their **personal feelings** to customers.

3 Employees **must not** express their personal preferences and taste to customer when recommending products and services.

4 Employees **must always** wear their **uniform**.

5 Employees **must always** put on their **assigned number tag**.

6 When any problem arises from service encounter, employees **must not deal** with the problem by themselves but referring to the store manager.

To ensure excellent service quality, employees must deliver **standardized service** for all customers so that all customers should have the same service experience.

Dehumanization and Service Personalization

CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction **by sticking to step-by-step guidelines** when serving customers.

2 Employees **are not supposed** to show their **personal feelings** to customers.

3 Employees **must not** express their personal preferences and taste to customer when recommending products and services.

4 Employees **must always** wear their **uniform**.

5 Employees **must always** put on their **assigned number tag**.

6 When any problem arises from service encounter, employees **must not deal** with the problem by themselves but referring to the store manager.

To ensure excellent service quality, employees must deliver **personalized service** for each customer so that each customer should have a personalized service experience.

Non-Dehumanization and Service Standardization

CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction **by acting professionally** when serving customers.

2 Employees **can show** their personal feelings to customers.

3 Employees **are free to express** their personal preferences and taste when recommending products and services.

4 Employees **can** wear their **own clothes**.

5 Employees **should put** on their **name tag**.

6 When any problem arises from the service encounter, employees **can try to deal** with the problem by themselves and if they cannot solve the problem, they can refer to the store manager.

To ensure excellent service quality, employees must deliver **standardized service** for all customers so that all customers should have the same service experience.

Non-Dehumanization and Service Personalization

CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction **by acting professionally** when serving customers.

2 Employees **can show** their personal feelings to customers.

3 Employees **are free to express** their personal preferences and taste when recommending products and services.

4 Employees **can** wear their **own clothes**.

5 Employees **should put** on their **name tag**.

6 When any problem arises from the service encounter, employees **can try to deal** with the problem by themselves and if they cannot solve the problem, they can refer to the store manager.

To ensure excellent service quality, employees must deliver **personalized service** for each customer so that each customer should have a personalized service experience.

Figure 19. *Four Versions of the Code of Conduct Used with Customers in Study 5*

147

10.2. Results

10.2.1. Manipulation Check

An independent-samples t-test revealed that participants in the dehumanization condition perceived higher dehumanization of employees by the coffee shop than those in the non-dehumanization condition ($M_{non-dehumanization} = 2.56$ vs. $M_{dehumanization} = 5.48$, $t(394) = -18.181$, $p < .001$), indicating that the dehumanization manipulation was successful. Similarly, the t-test also showed that participants in the standardization condition perceived a greater standardized service than those in the personalization condition ($M_{personalization} = 3.56$ vs. $M_{standardization} = 5.09$, $t(394) = -8.449$, $p < .001$), indicating that the service style manipulation was successful.

10.2.2. Distinction between Standardization and Dehumanization

We found no evidence supporting that standardization was empirically indistinguishable from dehumanization in this study. Particularly, an independent-samples t-test revealed that standardization manipulation did not influence dehumanization perception ($M_{personalization} = 3.97$ vs. $M_{standardization} = 4.10$, $t(394) = -.581$, $p = .56$). In contrast, dehumanization manipulation had a significant influence on standardization perception ($M_{non-dehumanization} = 3.47$ vs. $M_{dehumanization} = 5.13$, $t(394) = -9.316$, $p < .001$). Importantly, consistent with our predictions, the t-tests showed that standardization did not have a significant effect on capitalism associations ($M_{personalization} = 4.79$ vs. $M_{standardization} = 4.79$, $t(394) = .002$, $p > .9$), or surface acting ($M_{personalization} = 4.42$ vs. $M_{standardization} = 4.64$, $t(394) = -1.223$, $p = .22$). In contrast, dehumanization had a significant effect on capitalism associations ($M_{non-dehumanization} = 4.35$ vs. $M_{dehumanization} = $

5.23, $t(394) = -5.971$, $p < .001$) and surface acting ($M_{\text{non-dehumanization}} = 3.66$ vs.

$M_{\text{dehumanization}} = 5.37$, $t(394) = -10.807$, $p < .001$), as hypothesized.

Additionally, we regressed the willingness to pay on standardization, political ideology, and their interaction. The two-way interaction between standardization and political ideology was statistically insignificant (self-identified political ideology: $b = -.13$, $t = -.225$, $p = .82$; party affiliation: $b = 2.93$, $t = .968$, $p = .33$). In contrast, when we regressed the willingness to pay on dehumanization, political ideology, and their interaction, we found a significant effect of the interaction, as hypothesized. We report these findings in the following section.

10.2.3. *Interactive Effect of Dehumanization and Political Ideology on Willingness to Pay*

Self-identified political ideology. We regressed the willingness to pay on dehumanization, political ideology, and their interaction. Two-way interactions between dehumanization and political ideology on willingness to pay were statistically significant ($b = .28$, $t = 2.382$, $p = .018$). A simple-slopes test showed that, for conservatives (+1SD), dehumanization increased willingness to pay ($M_{\text{non-dehumanization}} = 4.07 vs. $M_{\text{dehumanization}} = 4.88, $b = .81$, $t = 2.004$, $p = .046$) while, among liberals (-1SD), the effect turned insignificant ($M_{\text{non-dehumanization}} = 3.29 vs. $M_{\text{dehumanization}} = 2.74, $b = -.55$, $t = -1.37$, $p = .17$). Thus, H4 was supported. Figure 20 further illustrates the interactive effect. A floodlight analysis further revealed that participants whose political ideology scores were 6.6 or above were more willing to pay a higher price for a dehumanizing service than for a non-dehumanizing service ($b = .61$, $t = 1.746$, $p = .08$),

whereas participants whose political ideology scores were 1.4 or below were more willing to pay a higher price for a non-dehumanizing service than for a dehumanizing service ($b = -.83$, $t = -1.677$, $p = .095$).
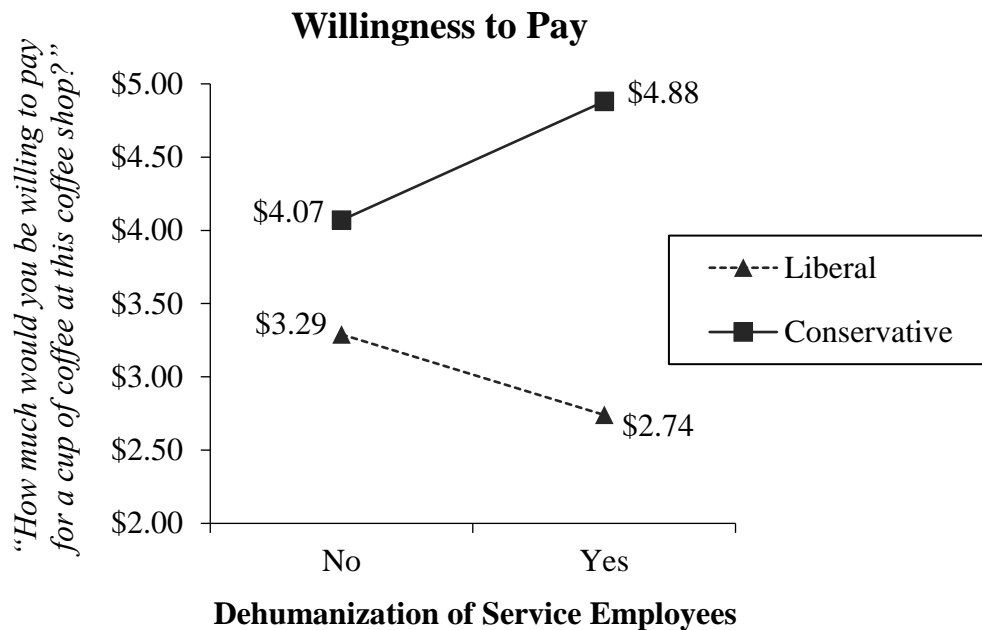
Figure 20. *The Interactive Effect of Dehumanization and Political Ideology on Willingness to Pay (Study 5)*

Party affiliation. A two-way ANOVA revealed a significant interaction between dehumanization and party affiliation ($F(1, 354) = 5.84$, $p = 0.016$). Follow-up simple contrasts revealed that dehumanization of service employees increased willingness to pay among Republicans ($M_{\text{non-dehumanization}} = \$3.63$ vs. $M_{\text{dehumanization}} = \$4.69$, $F(1, 354) = 4.744$, $p = .03$), while, among Democrats, willingness to pay was similar across dehumanization conditions ($M_{\text{non-dehumanization}} = \$3.69$ vs. $M_{\text{dehumanization}} = \$3.28$, $F(1, 354) = 1.273$, $p = .26$). Thus, H4 was supported. Figure 21 further illustrates the interaction.

Willingness to Pay

Non-Dehumanization of Employees ■ Dehumanization of Employees
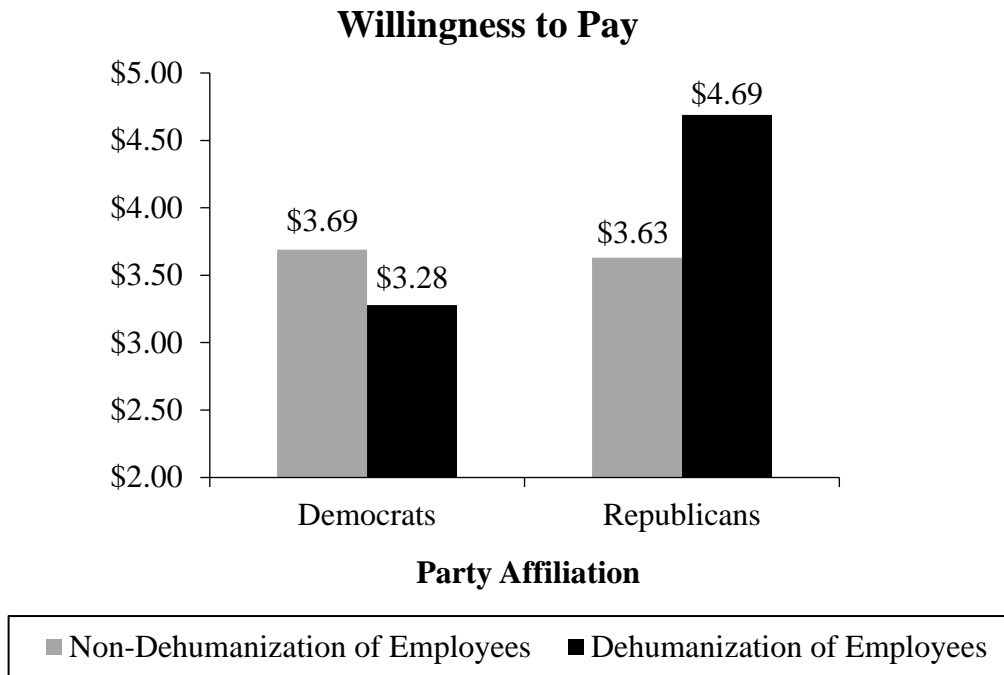
Figure 21. *The Interactive Effect of Dehumanization and Political Ideology on Willingness to Pay (Study 5).*

10.2.4. *Mediating Role of Capitalism Associations*

Self-identified political ideology. To test the mediating role of capitalism associations, we run PROCESS model 14 (Hayes 2017) with 5,000 bootstrapped samples and 95% confidence intervals (CIs). We included dehumanization as an independent variable, political ideology as a moderator, capitalism associations as a mediator, and willingness to pay as a dependent variable. The analysis revealed that capitalism associations mediated the interactive effect of dehumanization and political ideology on willingness to pay (Index = .12, 95% CI = [.0517, .2049]). Among conservatives, the indirect positive effect of dehumanization on willingness to pay through capitalism associations was statistically significant (+1SD; b = .603, 95% CI = [.2964, .9626]), whereas, among liberals, the effect turned insignificant (+1SD; b = -.004, 95% CI = [-.1996, .1824]). Particularly, dehumanization increased capitalism

associations ($b = .97$, $t = 6.22$, $p < .001$). The effect of capitalism associations on willingness to pay was dependent upon political ideology ($b = .127$, $t = 3.54$, $p < .001$). Capitalism associations increased willingness to pay among conservatives (+1SD, M_{low} capitalism associations (-1SD) = \$3.35, M_{high} capitalism associations (+1SD) = \$5.28, $b = .62$, $t = 4.398$, $p < .001$) but not among liberals (+1SD, M_{low} capitalism associations (-1SD) = \$3.09, M_{high} capitalism associations (+1SD) = \$3.07, $b = -.004$, $t = -.036$, $p = .97$). Thus, H5 was supported. The graphs in Figure 22 illustrate the moderated mediation model.

Conditional indirect effect of the model: Index = .12, 95% CI = [.0517, .2049]
Indirect effect among liberals: b = -.004, 95% CI = [-.1996, .1824]
Indirect effect among conservatives: b = .603, 95% CI = [.2964, .9626]
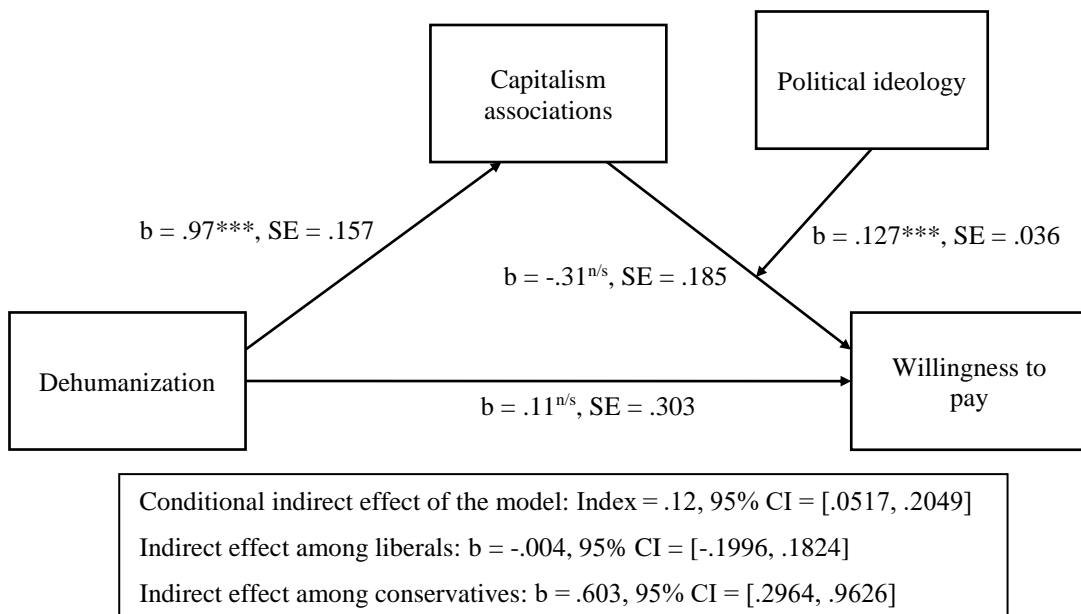
Figure 22. *The Conditional Indirect Effect of Dehumanization and Political Ideology on Willingness to Pay through Capitalism Associations (Study 5)*

Note: All coefficients reported above are unstandardized. n/s Non-Significant. *** p < .001

Note that, when including both surface acting and capitalism associations as dual mediators in the moderated mediation model, we found that capitalism associations still mediated the interactive effect of dehumanization and political ideology on willingness to pay (Index = .10, 95% CI = [.0329, .1774]) but surface acting did not (Index = .075, 95% CI = [-.0384, .1967]).

We also test the mediating role of service consistency using PROCESS model 14. The analysis revealed that service consistency did not mediate the interactive effect of

dehumanization and political ideology on willingness to pay (Index = .014, 95% CI = [-.0453, .0791]). Particularly, while dehumanization increased service consistency (b = .66, t = 4.57, p < .001), the effect of service consistency on willingness to pay was not dependent upon political ideology (b = .0215, t = .505, p = .61). Furthermore, when including service consistency and capitalism associations as dual mediators in the moderated mediation model, we found that capitalism associations still mediated the interactive effect of dehumanization and political ideology on willingness to pay (Index = .13, 95% CI = [.0518, .2130]) but service consistency did not (Index = -.027, 95% CI = [-.0877, .0276]).

Party affiliation. We also run a similar PROCESS model with party affiliation as a moderator. Again, the analysis revealed that capitalism associations mediated the interactive effect of dehumanization and party affiliation on willingness to pay (Index = .59, 95% CI = [.2163, 1.0645]). Among Republicans, the indirect positive effect of dehumanization on willingness to pay through capitalism associations was statistically significant (b = .68, 95% CI = [.3418, 1.1123]), whereas, among Democrats, the effect turned insignificant (b = .094, 95% CI = [-.1116, .2722]). Particularly, dehumanization increased capitalism associations (b = .97, t = 6.22, p < .001). The effect of capitalism associations on willingness to pay was dependent upon party affiliation (b = .602, t = 3.06, p = .002). Capitalism associations increased willingness to pay among Republicans ($M_{\text{low capitalism associations (-1SD)}}$ = \$3.17, $M_{\text{high capitalism associations (+1SD)}}$ = \$5.34, b = .699, t = 4.42, p < .001) but not among Democrats ($M_{\text{low capitalism associations (-1SD)}}$ = \$3.33, $M_{\text{high capitalism associations (+1SD)}}$ = \$3.63, b = .097, t = .793, p = .43). Thus, H5 was supported. The graphs in Figure 23 illustrate the moderated mediation model.

153
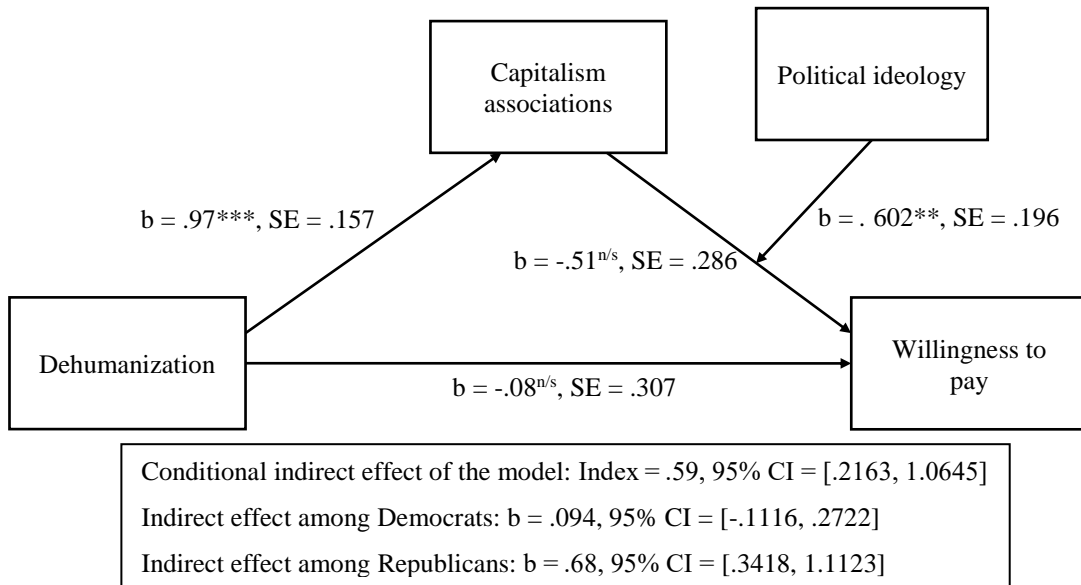
Figure 23. *The Conditional Indirect Effect of Dehumanization and Party Affiliation on*

Willingness to Pay through Capitalism Associations (Study 5).

*Note: All coefficients reported above are unstandardized. n/s Non-Significant. ** p < .01, *** p < .001*

And again, when including both surface acting and capitalism associations as dual

mediators in the moderated mediation model, we found that capitalism associations still

mediated the interactive effect of dehumanization and party affiliation on willingness to

pay (Index = .55, 95% CI = [.1833, 1.016]) but surface acting did not (Index = .1095,

95% CI = [-.4838, .7369]).

Similarly, we also test the mediating role of service consistency using PROCESS

model 14. The analysis revealed that service consistency did not mediate the interactive

effect of dehumanization and party affiliation on willingness to pay (Index = .14, 95%

CI = [-.1046, .4504]). When including service consistency and capitalism associations

as dual mediators in the moderated mediation model, we found that capitalism

associations still mediated the interactive effect of dehumanization and party affiliation

on willingness to pay (Index = .565, 95% CI = [.1921, 1.0380]) but service consistency

did not (Index = -.026, 95% CI = [-.2870, .2404]).

10.2.5. *The Moderating Effect of Service Personalization*

A two-way ANOVA revealed a marginally significant interaction between dehumanization and service personalization ($F(1, 354) = 3.362$, p = .068). Follow-up simple contrasts revealed that, in the personalization condition, dehumanization has a marginally positive effect on willingness to pay ($M_{\text{non-dehumanization}} = \$3.48$ vs. $M_{\text{dehumanization}} = \$4.17$, $F(1, 354) = 2.772$, $p = .097$), while, in the standardization condition, willingness to pay was similar across dehumanization conditions ($M_{\text{non-dehumanization}} = \$3.87$ vs. $M_{\text{dehumanization}} = \$3.48$, $F(1, 354) = .870$, $p = .352$). Thus, H6 was supported. The graph in Figure 24 further illustrates the interaction.
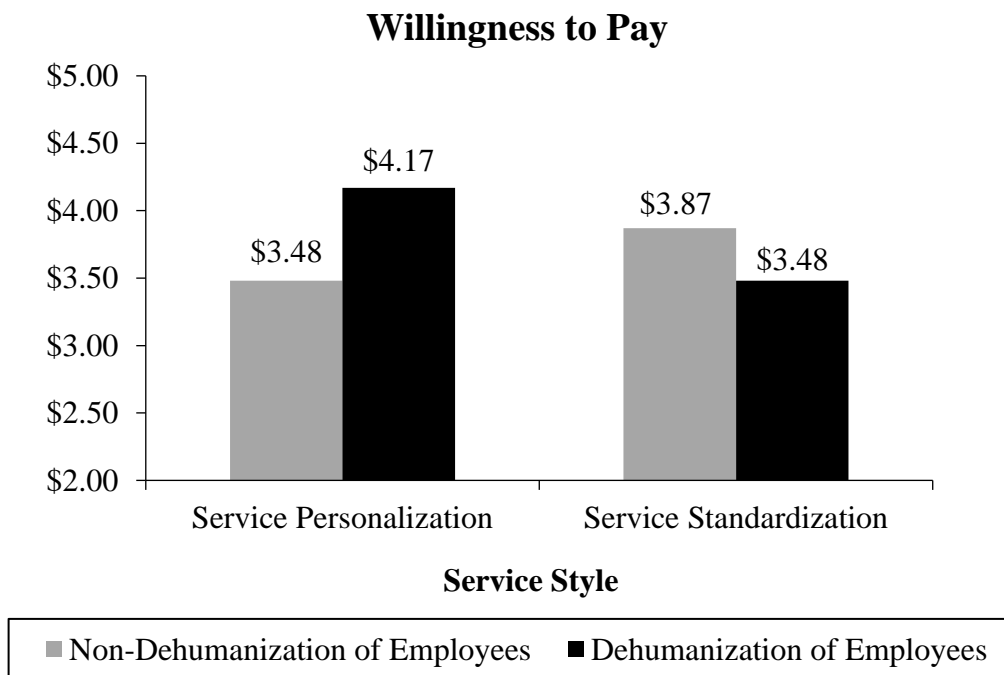
Willingness to Pay

Figure 24. *The Interactive Effect of Dehumanization and Service Personalization on Willingness to Pay (Study 5)*

10.2.6. *Post-hoc Analysis*

We also performed the three-way interaction of dehumanization, political ideology, and service personalization on willingness to pay.

Self-identified political ideology. We regressed the willingness to pay on dehumanization, political ideology, personalization (vs. standardization), and their interactions. The three-way interaction of dehumanization, political ideology, and personalization was statistically significant ($b = -.494$, $t = -2.12$, $p = .035$). In the personalization condition, the two-way interaction of dehumanization and political ideology was statistically significant ($b = .48$, $F(1,350) = 9.455$, $p = .002$). Specifically, dehumanization increased willingness to pay among conservatives (+1SD; $M_{\text{non-dehumanization}} = \$3.61$ vs. $M_{\text{dehumanization}} = \$5.38$, $b = 1.76$, $t = 3.29$, $p = .001$) while, among liberals (-1SD), the effect turned insignificant ($M_{\text{non-dehumanization}} = \$3.33$ vs. $M_{\text{dehumanization}} = \$2.71$, $b = -.61$, $t = -1.06$, $p = .29$). In the standardization condition, the two-way interaction of dehumanization and political ideology was statistically insignificant ($b = -.013$, $F(1,350) = .006$, $p = .94$). Specifically, willingness to pay was similar across dehumanization conditions among both conservatives (+1SD; $M_{\text{non-dehumanization}} = \$4.64$ vs. $M_{\text{dehumanization}} = \$4.18$, $b = -.46$, $t = -.751$, $p = .45$) and liberals (-1SD; $M_{\text{non-dehumanization}} = \$3.24$ vs. $M_{\text{dehumanization}} = \$2.85$, $b = -.397$, $t = -.702$, $p = .48$). The graphs in Figure 25 plot the three-way interaction.

Personalization condition

Willingness to pay — Dehumanization of Service Employees

$6.00 — $5.38
$3.61
$3.33
$2.71

No   Yes

Liberal
Conservative

Standardization condition
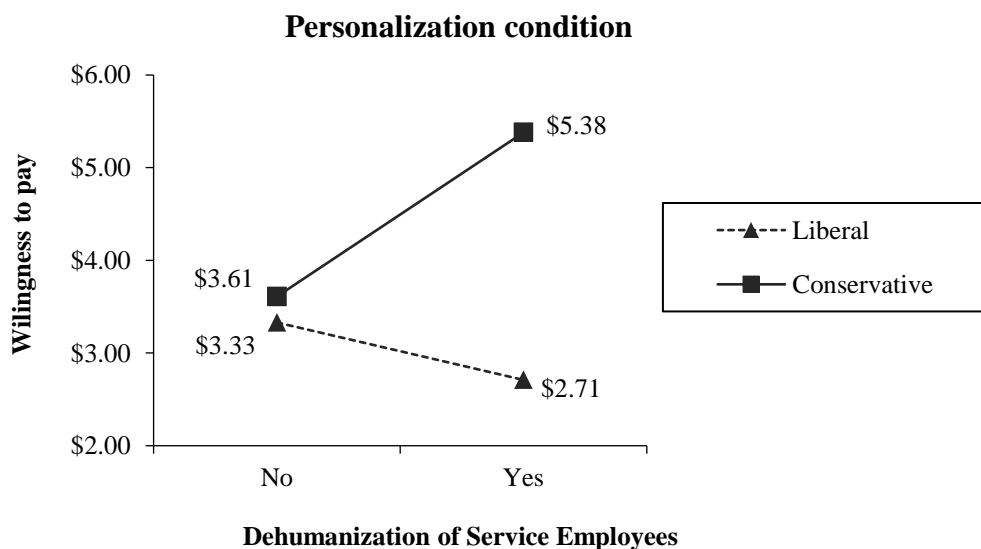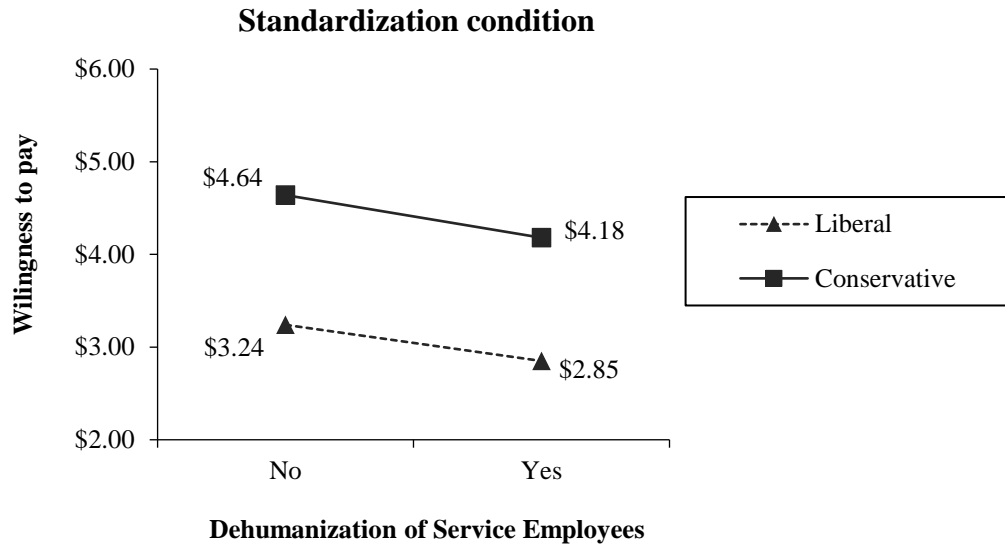
Figure 25. *Three-Way Interaction of Dehumanization, Political Ideology, and*

Personalization on Willingness to Pay (Study 5)

Party affiliation. We also regressed the willingness to pay on dehumanization, party affiliation, personalization (vs. standardization), and their interactions. The three-way interaction of dehumanization, party affiliation, and personalization was statistically insignificant ($b = -.532$, $t = -.43$, $p = .67$). Nevertheless, the trend was as expected. In the personalization condition, the two-way interaction of dehumanization and party affiliation was statistically significant ($b = 1.704$, $F(1,350) = 3.95$, $p = .048$). Specifically, dehumanization increased willingness to pay among Republicans ($M_{\text{non-dehumanization}} = \$3.37$ vs. $M_{\text{dehumanization}} = \$5.06$, $b = 1.69$, $t = 2.498$, $p = .013$) while, among Democrats, the effect turned insignificant ($M_{\text{non-dehumanization}} = \$3.53$ vs. $M_{\text{dehumanization}} = \$3.52$, $b = -.013$, $t = -.024$, $p = .98$). In the standardization condition, the two-way interaction of dehumanization and political ideology was statistically insignificant ($b = 1.17$, $F(1,350) = 1.79$, $p = .18$). Willingness to pay was similar across dehumanization conditions among both Republicans ($M_{\text{non-dehumanization}} = \$3.88$ vs.

$M_{\text{dehumanization}} = \$4.23$, $b = .35$, $t = .504$, $p = .62$) and Democrats ($M_{\text{non-dehumanization}} = \$3.87$

vs. $M_{\text{dehumanization}} = \$3.05$, $b = -.82$, $t = -1.56$, $p = .12$).

10.3. Discussion

This study offers compelling evidence that service standardization cannot fully account for the effects of dehumanization, at least within our research context. Particularly, the finding shows that dehumanization has a significant influence on perceived standardization, indicating a partial overlap between dehumanization and standardization. Importantly, service standardization (vs. personalization) does not have a significant effect on capitalism associations, surface acting, and also dehumanization perception. In contrast, as shown in the previous studies and this study, dehumanization has a significant impact on surface acting and capitalism associations. Furthermore, unlike dehumanization, this study also shows that the effect of service standardization on willingness to pay is not contingent upon the political ideology of consumers, which further demonstrates the validity of our findings.

Regarding the effects of dehumanization, the findings show that dehumanization increases willingness to pay for a service among conservatives but not among liberals (H4). Further examination of the underlying process shows that dehumanization signifies a prototypical capitalist firm, which in turn enhance conservatives' willingness to pay a higher price (H5). Additionally, we observe similar effects when measuring political ideology using party affiliation. Furthermore, when including surface acting in the moderated mediation model as another mediator, the mediating effect of capitalism associations still holds while surface acting does not mediate the interactive effect. We also show that service consistency does not mediate the interactive effect, which

158

provides important evidence for ruling out the alternative account of tolerance of ambiguity.

Finally, we also aimed to examine the moderating role of personalization in this study. The findings indicate that dehumanization increases willingness to pay for personalized services, but this is not the case for willingness to pay for a standardized service (H6). Furthermore, post-hoc analysis shows the significant three-way interaction of dehumanization, political ideology, and personalization. Particularly, conservatives and liberals are willing to pay a similar price for a dehumanizing (vs. non-dehumanizing) service when that service is standardized. Nevertheless, when a service is personalized, conservatives are willing to pay more for a dehumanization (vs. non-dehumanizing) service, unlike liberals. When using the party affiliation measure of political ideology, we cannot observe a significant three-way interaction; nevertheless, a similar trend emerges, such that, when a service is personalized, dehumanization can increase willingness to pay among Republicans.

11. CONCLUSION

The conclusion chapter begins with a summary of the findings of the five studies. Next, we discuss the theoretical and methodological contributions of this research. We then present its practical implications. Finally, we acknowledge the limitations of this research while suggesting avenues for future research.

11.1. General Discussion

Under a capitalist system, many service firms dehumanize their employees to eventually increase the profitability of service productions, and yet the extant literature offers a lack of insight into consumers' reactions towards this form of marketplace dehumanization. This dissertation systematically examines when and why dehumanization influences consumers' willingness to use a service and their willingness to pay for the service. We test our hypotheses using five studies with different designs (i.e., text mining, between-subjects experiments, a quasi-experiment), in different contexts (coffee shop, hotel, retailing, airline). We also employ both implicit and explicit manipulations of dehumanization in three experiments to strengthen the validity of our findings. In general, the findings indicate that dehumanization of service employees is perceived negatively among liberals. Further investigation into the underlying mechanism indicates that dehumanization induces a stronger perception of surface acting, which in turn reduces willingness to use service among liberals, but not among conservatives. The negative effect of dehumanization on willingness to use a service also is more prominent for independent, family-run firms. Strikingly, the findings show that dehumanization might have a functional consequence, especially for

conservatives. This is because this form of dehumanization can signify a prototypical

capitalist firm stereotyped with great consumer and monetary values, which in turn

increases the willingness to pay a higher price for a service using dehumanization of

service employees among conservatives, who tend to rely on heuristic and stereotypical

thinking. We also show that the positive effect of dehumanization on willingness to pay,

especially among conservatives, is also heightened when the service is personalized.

Table 9 provides a summary of the research findings.

Table 9. *Summary of Empirical Findings*

Study 1. Large-Scale Text Mining				
Online Comments on Yahoo Article about Dehumanization of Amazon Employees (Mostly US readers)				
Liberalism (N = 1167, $M_{liberalism}$ = .4092)→Online Stance on Dehumanization			B = -2.98	p < .001
Political ideology (Dummy, N = 1147)*Online Stance on Dehumanization			χ^2 = 104.6	p < .001
	Oppose Dehumanization	*Support Dehumanization*		
Liberals (Dummy)	105	277	χ^2 = 77.45	*p < .001*
Conservatives (Dummy)	45	720	χ^2 = 196.8	*p < .001*
Online Comments on Mail Article about Dehumanization of Ryanair Employees (Mostly UK readers)				
Liberalism (N = 192, $M_{liberalism}$ = .4940) → Online Stance on Dehumanization			B = -1.86	p < .001
Political ideology (Dummy, N = 182)*Dehumanization			χ^2 = 17.85	p < .001
	Oppose Dehumanization	*Support Dehumanization*		
Liberals (Dummy)	67	18	χ^2 = 28.25	*p < .001*
Conservatives (Dummy)	47	50	χ^2 = .093	*p = .761*
Study 2. Choice Preference (*N* = 174, Prolific, US participants)				
Political ideology → Choice preference (Scale)			t = -2.71	p = .007
Political ideology → Choice preference (Choice)			χ^2 = 4.27	p = .039
	Non-Dehumanization	*Dehumanization*		
Pre-identified Liberals	*80*	*6*	χ^2 =63.67	*p <.001*
Pre-identified Conservatives	*72*	*15*	χ^2 =37.35	*p <.001*
Study 3. Mediating Role of Surface Acting (*N* = 268, Prolific, US participants)				
Dehumanization × Political Ideology → Willingness to Use Service			b = .36	p < .001
	Non-Dehumanization	Dehumanization		
Liberals (-1SD)	*6.08*	*3.49*	*b = -2.59*	*p < .001*
Conservatives (+1SD)	*5.67*	*4.45*	*b = -1.22*	*p < .001*
Mediating process (Model 14): Anticipated surface acting mediated the interaction of dehumanization and political ideology on willingness to use service (Index = .11, 95% CI = [.0118, .2153]).				
Study 4. Need for Human Interaction: The Role of Firm Types (*N* = 398, MTurk, US participants)				
Dehumanization × Political Ideology → Willingness to Use Service			b = .103	p = .048
	Non-Dehumanization	*Dehumanization*		

161

	Non-Dehumanization	Dehumanization		
Liberals (-1SD)	*5.25*	*4.77*	*b = -.48*	*p = .015*
Conservatives (+1SD)	*5.28*	*5.35*	*b = .07*	*p = .71*
Dehumanization × Hotel Types → Willingness to Use Service			F = 2.91	p = .089
	Non-Dehumanization	*Dehumanization*		
Independent firm	*5.37*	*4.96*	*F = 4.40*	*p = .037*
Global chain	*5.16*	*5.22*	*F = .106*	*p = .75*
Global Chain: Dehumanization × Political Ideology → Willingness to Use Service			b = .013	p = .86
	Non-Dehumanization	*Dehumanization*		
Liberals(-1SD)/chain	*5.02*	*5.01*	*b = -.01*	*p = .97*
Conservatives(+1SD)/chain	*5.33*	*5.39*	*b = .06*	*p = .83*
Independent Firm: Dehumanization × Political Ideology → Willingness to Use Service			b = .17	p = .026
	Non-Dehumanization	*Dehumanization*		
Liberals(-1SD)/independent	*5.47*	*4.58*	*b = -.88*	*p < .01*
Conservatives(+1SD)/independent	*5.26*	*5.29*	*b = .03*	*p = .91*

Study 5. Willingness to Pay: The Mediating Role of Capitalism Associations (*N* = 396, MTurk, US participants)

(Non-significant) effects of standardization

	Personalization	Standardization		
Dehumanization perception	*3.97*	*4.10*	*t = -.581*	*p = .56*
Capitalism stereotypes	*4.79*	*4.79*	*t = .002*	*p > .9*
Surface acting	*4.42*	*4.64*	*t = -1.22*	*p = .22*
Standardization × Political Ideology → Willingness to Pay			b = -.14	p = .82

Interactive effects of dehumanization and political ideology (and standardization)

Dehumanization × Political Ideology → Willingness to Pay			b = .28	p = .018
	Non-Dehumanization	*Dehumanization*		
Liberals (-1SD)	*$3.29*	*$2.74*	*b = -.55*	*p = .17*
Conservatives (+1SD)	*$4.07*	*$4.88*	*b = .81*	*p = .046*

Mediating process (Model 14): Capitalism associations mediated the interaction of dehumanization and political ideology on willingness to pay (Index = .12, 95% CI = [.0517, .2049]).

Dehumanization × Service Personalization → Willingness to Pay			F = 3.362	p = .068
	Non-Dehumanization	*Dehumanization*		
Service Personalization	*$3.48*	*$4.17*	*F = 2.772*	*p = .097*
Service Standardization	*$3.87*	*$3.48*	*F = .870*	*p = .352*
Dehumanization× Political Ideology × Personalization → Willingness to Pay			b = -.494	p = .035
	Non-Dehumanization	*Dehumanization*		
Dehumanization × political ideology (personalization)			b = .48	p = .002
Liberals(-1SD)/Personalization	*$3.33*	*$2.71*	*b = -.61*	*p = .29*
Conservatives(+1SD)/Personalization	*$3.61*	*$5.38*	*b = 1.76*	*p = .001*
Dehumanization × political ideology (standardization)			b = -.013	p = .94
Liberals(-1SD)/Standardization	*$3.24*	*$2.85*	*b = -.397*	*p = .48*
Conservatives(+1SD)/Standardization	*$4.64*	*$4.18*	*b = -.46*	*p = .45*

Note: *In Study 5, the results were similar when using measuring political ideology using party affiliation*

Study 1 provides real-life evidence that liberals and conservatives have different online stances on dehumanization of service employees. In this study, we measure the online stance on dehumanization by manually classifying readers' comments under two

articles reporting on dehumanization. We then measure the political ideology of the readers by using the deep learning algorithm (i.e., LSTM) to classify millions of their past comments on those news websites. The statistical analysis consistently indicates the proposed relationship between political ideology and the online stance on dehumanization across the two websites, such that, the more liberal readers are, the more likely they are to express the opposing online stance on dehumanizing practices. Thus, this study has great external validity by revealing the effect using real-life behavioural data, across different service settings (front-line, back-end) and different countries (United Kingdom, United States).

Study 2 and Study 3 provide causal evidence for the observed effect in Study 1 in a more controlled environment. In Study 2, we examined the difference in choice preference between participants who pre-identify as liberals and participants who pre-identify as conservatives. The findings show that pre-identified liberals are less likely to use the dehumanization (vs. the non-dehumanization) coffee shop option than pre-identified conservatives (H1). In Study 3, we manipulate dehumanization of service employees and show that dehumanization reduces the willingness to visit the coffee shop among liberals whereas the effect is significantly weaker among conservatives (H1). Furthermore, Study 3 also demonstrates the underlying mechanism of this interactive effect by showing that dehumanization increases surface acting, which in turn decreases willingness to use the service among liberals but not among conservatives (H2).

Since we use an explicit manipulation of dehumanization in Study 3, we note that the observed negative effect of dehumanization, especially among conservatives, might be due to the tendency to social desirability bias. Thus, in Study 4, we strengthen the validity of our research by replicating the findings of previous studies with a subtler

manipulation of dehumanization and setting it in another service context, hotel service. The findings show that dehumanization of service employees still reduces willingness to stay at a hotel among liberals but not among conservatives (H1). Furthermore, this study also indicates that, when customers expect low human interactions during service interactions (e.g., global chains), the effect of dehumanization on willingness to use service diminishes; conversely, when consumers' expectation for human interactions is high (e.g., independent, family-run firms), the effect is reinforced (H3).

Finally, the findings of Study 5 provide empirical evidence supporting that standardization, despite sharing variance with dehumanization, does not drive our proposed effects. We show that service standardization does not significantly influence proposed mediators – namely, surface acting, and capitalism stereotypes – and consequently does not interact with the political ideology to influence willingness to pay for a service. Furthermore, the findings also demonstrate the positive aspect of dehumanization, such that conservatives are more willing to pay a higher price for a dehumanized service (H4) because dehumanization signifies a typical capitalist enterprise (H5). We also find that dehumanization is also monetizable for personalized service (H6), especially among conservatives.

Other Alternative Explanations

The findings of five studies also provide evidence that enables us to rule out other plausible alternative accounts (i.e., tolerance of ambiguity, the historical association between certain labour practices and political orientation). First, the further mediation analysis in Study 5 shows that service consistency does not mediate the interactive effect of dehumanization and political ideology on willingness to pay, thereby ruling out the alternative account of the ideological difference in tolerance of ambiguity.

Second, it is possible that the historical association between labour practices (e.g., support for a higher minimum wage, oppose unethical practices) and political ideology might explain our findings that liberals react negatively towards dehumanization. Particularly, in Study 1, the Mail article focuses on a sub-standard minimum wage to describe the dehumanizing practice of Ryanair. Thus, the reason for negative reactions towards dehumanization among liberals could be just because of their continuing support for a higher minimum wage. However, dehumanization described in the Yahoo article and other studies is not related to employees' wages. Thus, we can confidently rule out this alternative explanation.

Another possible alternative account is that dehumanization might be perceived as an unethical practice and liberals have also been well-known for their empathy for the proletariat (i.e., the working class) throughout history. Thus, liberals might react more negatively towards this unethical practice than conservatives simply because they have greater empathy for employees. However, different pieces of evidence suggest that it is not a case in our research. Particularly, the findings of Studies 4 and 5 show that dehumanization of service employees in its implicit form, which is a totally ethical practice, can still evoke negative responses among liberals. Moreover, Study 4 indicates that dehumanization does not evoke more empathy among liberals than among conservatives. Finally, if such a historic association between political ideology and certain labour practices plays a role, it should be expected that the negative reactions should be stronger for older liberals (vs. younger liberals) who spend more time learning and maintaining this historic association. However, across four experimental studies, we found that there was no significant difference between young liberals and old liberals in rating their willingness to use or willingness to pay when perceiving dehumanization (Study 2: $p = .28$, Study 3: $p = .58$, Study 4: $p = .17$, Study 5: $p = .84$).

Therefore, the current evidence suggests that our findings cannot be entirely explained by the historic association between political orientation and the support/opposition of labour practices.

11.2. Theoretical and Methodological Contributions

11.2.1. Contributions to Marketplace Dehumanization Literature

By illuminating the effect of dehumanization of service employees and identifying the important moderator (i.e., political ideology), we considerably expand the emerging literature about marketplace dehumanization (Castelo et al. 2019; Henkel et al. 2018; Herak et al. 2020; Hill et al. 2016). First, while previous research focuses on the dehumanizing perceptions of consumers on other marketplace actors including other consumers (Castelo et al. 2019), service employees (Henkel et al. 2018), and an ad actor/actress (Herak et al. 2020), we focus on the service practice that service firms dehumanize their employees by reducing them to human robots. This form of dehumanization is arguably more commonplace in the marketplace and has gone hand-in-hand with the capitalist system since the Industrial Revolution. Yet, our research is the first to systematically study the downstream consequences of this practice from the consumer perspective. Integrating insight from political ideology literature, we demonstrate that, while dehumanization of employees – by increasing surface acting – reduces willingness to use a service among liberals, dehumanization – by increasing capitalism associations – can also motivate conservatives to pay a higher price for the service. Thus, this research extends the extant literature of dehumanization that implies its negative consequences (e.g., Bell and Khoury 2016; Caesens et al. 2017; Henkel et

al. 2018; Herak et al. 2020; Marx 1844; Weber 1930; for a comprehensive review in psychology see Haslam and Loughnan 2014; Haslam and Stratemeyer 2016) by identifying when (i.e. for liberal consumers, and independent, family-run firms) and why (i.e., increasing perception of faking emotions) the negative reactions are particularly strong.

Strikingly, we also show that dehumanization of service employees might be monetizable among particular consumers. It is clear that, by reducing employees to acting and behaving like robots, firms can achieve efficiency, consistency, predictability, and eventually profitability (Ritzer 1983). We demonstrate that this positive aspect of dehumanization, apart from directly influencing a firm's productivity, also indirectly increases its profitability by enhancing some consumers' (i.e., conservatives) willingness to pay more money for a service, especially when accompanied by a certain service style (i.e. personalization). By revealing that this effect emerges because of the long-standing association between dehumanization and capitalism, we also offer a novel underlying mechanism that is worthy of further exploration (we return to this point in section 11.4).

The striking findings, however, imply a bigger societal challenge. Philosophers and sociologists have repeatedly highlighted dehumanization of employees as an adverse consequence of the capitalist system (e.g., Blauner 1964; Fromm 1974; Goldman and Falk 2003; Leidner 1993; Marx 1844; Ritzer 1983; Thompson 1983; Timmermans and Epstein 2010; Weber 1930), perhaps as an attempt to inspire individuals to fight back for their own humanity and others'. Yet, our findings show that some do, but some might embrace dehumanization as a signal of a well-functioning capitalist enterprise. The service firms, hence, might have another money-driven reason to exclude humanity from their service interactions.

167

11.2.2. Contributions to Consumers' Political Ideology Literature

Our research also extends the current understanding of consumers' political ideology (e.g., Han et al. 2019; Irmak et al. 2020). Previous findings show that liberals and conservatives have distinctive reactions to many firm stimuli such as product and firm information (Ordabayeva and Fernandes 2018; Winterich et al. 2012), ad framing (Kidwell et al. 2013; Kim et al. 2018; Septianto et al. 2019), product labelling (Irmak et al. 2020), and product and brand designs (Angle et al. 2017; Ordabayeva and Fernandes 2018). In line with the above findings, we first show that liberals and conservatives also have different reactions towards service practices (i.e., dehumanization of service employees). Second, our findings also expand the extant literature by drawing attention to the role of political ideology in service interactions that was neglected up to this research. Third, we further demonstrate two novel mediators that serve as opposing underlying processes that differ in effects across the political ideology spectrum.

Finally, our research, Study 1 particularly, also offers a novel method to measure and operationalize political ideology. Studies about political ideology heretofore mostly utilize well-established self-reported measures of political ideology (e.g., Farmer et al. 2020b; Fernandes and Mandel 2014; Graham et al. 2009; Kidwell et al. 2013; Stern et al. 2014), which are also used in most of our studies. Recent studies have started using secondary *structured* data sources to measure political ideology at the individual level (Kim et al. 2018), at the firm level (e.g., Han et al. 2019; Jung et al. 2017b), at the county level (e.g., Irmak et al. 2020), and at the state level (e.g., Han et al. 2019; Khan et al. 2013; Ordabayeva and Fernandes 2018). Study 1 of this research proposed another way to measure political ideology, by using a large-scale *unstructured* data source that

was organically generated by online users. Given the unlimited supply of user-generated content on various new online sources (e.g., online news websites, social media sites, forums) and the power of artificial intelligence algorithms, it is now easier than ever to transform this type of unstructured data into a reliable source to capture theoretically meaningful constructs – political ideology, for example – beyond self-report data and structured data. In addition to promoting this new method, our research also demonstrates a straightforward procedure for its application.

11.3. Managerial Implications

Our investigation of the dehumanization of service employees and political ideology has important practical implications. At the basic level, our research suggests that service managers should be mindful of the downstream consequences on customers of the prevalent service practice – which is asking employees to behave and appear like robots. Particularly, the findings of the five studies consistently indicate that dehumanization can reduce willingness to use a service among liberals, but this can increase willingness to pay for a service among conservatives. As a result, it is extremely important for managers to evaluate whether their service practice and communication fit the political ideology of the target consumers.

Importantly, it is easier than ever for managers nowadays to identify the political ideology of consumers. Previous studies show that, by just knowing the consumers' geographic locations at the state level or county level, firms can have a fairly accurate description of consumers' political ideology (e.g., Han et al. 2019; Irmak et al. 2020; Khan et al. 2013; Ordabayeva and Fernandes 2018). Our findings suggest that firms, especially independent firms, operating in liberal states might re-consider when using

dehumanization of employees. In contrast, in conservative states, a firm might be able to monetize dehumanization of its service employees, especially when their service is highly personalized for customers. Furthermore, firms can utilize our findings when advertising their service (robot-like vs. human-like service) on media outlets whose target audiences are clearly identified as conservatives (e.g., Wall Street Journal, Fox Network) or liberals (e.g., New York Times, CNN). Service managers can also directly measure their consumers' political ideology using a simple demographic question and tailor their service accordingly. Moreover, service firms can also adopt a similar approach to our Study 1 to measure political ideology using user-generated content. Instead of directly asking target consumers about their political ideology, service firms can just obtain their online public profile (e.g., Twitter, Facebook usernames) and apply a natural language-processing technique to identify political ideology using their public social media posts/comments.

Studies 4 and 5 also suggest other practical factors that influence the effect of political ideology. Particularly, the findings imply that managers of independent service firms need to weigh the negative influence of dehumanization on consumers against its benefits in enabling consistent and productive service productions. In contrast, service managers can raise the price of their service to generate profitability if they personalize it while asking employees to behave like robots for their conservative consumers. However, the monetization of dehumanization also raises an important issue for policymakers. While our research mainly focuses on a subtle form of dehumanization, it is possible that this result can hold even in cases of more explicit forms of dehumanization (e.g., sweatshop workers) that are extremely harmful to employees. If consumers are willing to pay a higher price for such services, capitalist firms might even try to capitalize on this and push this practice to the extremes. Thus, policymakers

need to intervene in those cases to ensure an acceptable working standard for employees and maintain a sustainable economic system.

11.4. Limitations and Future Research

Our research is subject to certain limitations that also offer promising avenues for future research. First, because dehumanization is a high-order construct that incorporates different elements, such as emotionality, individuality, and rationality (Haslam 2006), manipulating any of these elements might unintentionally change the variances of other, unaccounted, variables rather than dehumanization. In this research, we manipulated dehumanization using two different ways, explicit manipulation (firm information and firm image) and implicit manipulation (the CCC), which can lend a great internal validity to our findings. We also strengthen the validity by using (manipulation) checks in all controlled studies, controlling certain confounds within the manipulative tasks (professionalism, politeness), and ruling out clear confounds (standardization, competence). And yet, it is highly possible that there are unseen confounds with our studies. Future research can re-examine our findings by using other types of dehumanization manipulation (e.g., an audible manipulation: robotic voice vs. human voice, showing a fictitious article describing either dehumanization or non-dehumanization of service employees). Second, although Study 1 generalizes our findings to the real-life online environments, it is also possible that the effects would be different in real-life offline contexts. For example, the anonymous nature of the online environment might increase polarizations in online responses. Further research can conduct field experiments using real behavioural outcomes to validate our theories. Third, in Study 1, we only collected comments under two online news articles that both

depict dehumanization of employees as a negative practice. In both articles, both the authors express strongly negative sentiments against dehumanization of employees. Therefore, to increase generalizability, further research could utilize online news articles that express more positive sentiments on dehumanization and written from other perspectives (e.g., employees).

Fourth, dehumanization of service employees can interact with other factors that are outside the scope of this research to influence other interesting outcomes. For example, the levels of service involvement might change consumer perceptions towards dehumanization. Previous studies show that highly involved customers tend to devote more time and efforts to search and understand the products and services (Beatty and Smith 1987; Maheswaran and Meyers-Levy 1990; Zaichkowsky 1985), indicating that they are more likely to engage in effortful and systematic thinking when processing information about products and services of interest. Therefore, those consumers might be less susceptible to capitalism associations while more susceptible to surface acting, and thus react more negatively towards dehumanization compared to less involved customers. Additionally, all of our studies are conducted in Western countries (United States, United Kingdom), so it could be interesting to see how consumers from countries that are less familiar with the capitalist system (e.g., communist countries like Vietnam and China) react to this practice; and whether capitalism associations play a stronger or weaker role for those customers. Furthermore, while we focus on the influence of dehumanization on firm-related outcomes, future research can enrich our findings by investigating how it influences employee-related outcomes such as willingness to tip. In addition, many service firms aim to eventually replace human service employees with service robots to achieve maximum service rationalization. It could be thought-provoking to understand whether the pre-existing dehumanization of

172

service employees can alter the consumers' perception about the substitution of human employees with robots.

Fifth, our research utilized a unidimensional measure of political ideology, which is consistent with previous studies (e.g., Han et al. 2019; Irmak et al. 2020; Kidwell et al. 2013), and empirically and theoretically supported (Hetherington 2001; Jost et al. 2009; Layman and Carsey 2002; Stimson 2015). However, previous studies suggest that using both social and economic dimensions of political ideology enables a more insightful understanding of this concept (Carmines and D'Amico 2015; Crawford et al. 2017; Feldman and Johnston 2014). In our context, we speculate that, because economic (vs. social) conservatives support the free market economy, they might have stronger reactions towards capitalism associations, whereas, as social (vs. economic) liberals emphasize universalism and self-direction values more, they might react more negatively towards surface acting.

Future research can further examine the roles of capitalism associations, an interesting concept introduced by our research. Because this research focuses on dehumanization, we highlight that dehumanization can signify a typical capitalist firm. Nevertheless, other factors (e.g., profitability, greediness) can also be a signal of capitalism. For example, capitalism associations might be one of the reasons why profitable firms keep increasing their profitability – in other words, they are "too big to fail". Particularly, by just being profitable, firms might activate capitalist stereotypes (e.g., efficiency, consistency, monetary value, high quality), which then increases customers' willingness to pay for their products and services, which then maintains their status as highly profitable firms. Such a profitability-capitalism cycle might have an important societal implication that is also worthy of examination. In addition, future research can also investigate the downstream consequences of capitalism associations

beyond self-report outcomes, and whether consumers might perceive this association in certain conditions.

Finally, recent research (Castelo et al. 2019; Henkel et al. 2018; Herak et al. 2020; Hill et al. 2016) and our research have started to identify different manifestations of marketplace dehumanization and its consequences. Nevertheless, more work is clearly needed to deepen the understanding of how dehumanization influences or is influenced by the marketplace. Future research can investigate different forms of marketplace dehumanization such as employees' dehumanization of customers, and the self-dehumanization of customers. For instance, previous studies show that medical employees use dehumanization of customers as a defensive mechanism to avoid psychological costs (e.g., burnout); thus, intuitively, one might ask whether it is the same for employees in commercial companies. Furthermore, it could be interesting to understand the relationship between this form of dehumanization and other market-related concepts (e.g., customer orientation).

REFERENCES

Allport, Gordon W. (1961), Pattern and Growth in Personality. Oxford: Holt, Reinhart & Winston.

Andrighetto, Luca, Cristina Baldissarri, Sara Lattanzio, Steve Loughnan, and Chiara Volpato (2014), "Human-Itarian Aid? Two Forms of Dehumanization and Willingness to Help after Natural Disasters," *British Journal of Social Psychology*, 53 (3), 573-84.

Angle, Justin W., Sokiente W. Dagogo-Jack, Mark R. Forehand, and Andrew W. Perkins (2017), "Activating Stereotypes with Brand Imagery: The Role of Viewer Political Identity," *Journal of Consumer Psychology*, 27 (1), 84-90.

Arnold, Denis G. and Norman E. Bowie (2003), "Sweatshops and Respect for Persons," *Business Ethics Quarterly*, 13 (2), 221-42.

Arnold, Denis G. and Laura P. Hartman (2006), "Worker Rights and Low Wage Industrialization: How to Avoid Sweatshops," *Human Rights Quarterly*, 28 (3), 676-700.

Ashforth, Blake E. and Yitzhak Fried (1988), "The Mindlessness of Organizational Behaviors," *Human Relations*, 41 (4), 305-29.

Aspelund, Anna, Marjaana Lindeman, and Markku Verkasalo (2013), "Political Conservatism and Left–Right Orientation in 28 Eastern and Western European Countries," *Political Psychology*, 34 (3), 409-17.

Bain, Paul, Joonha Park, Christopher Kwok, and Nick Haslam (2009), "Attributing Human Uniqueness and Human Nature to Cultural Groups: Distinct Forms of Subtle Dehumanization," *Group Processes & Intergroup Relations*, 12 (6), 789-805.

Bandura, Albert (1999), "Moral Disengagement in the Perpetration of Inhumanities," *Personality and Social Psychology Review*, 3 (3), 193-209.

Barger, Patricia B. and Alicia A. Grandey (2006), "Service with a Smile and Encounter Satisfaction: Emotional Contagion and Appraisal Mechanisms," *Academy of Management Journal*, 49 (6), 1229-38.

Barrett, Frank J. (1998), "Coda—Creativity and Improvisation in Jazz and Organizations: Implications for Organizational Learning," *Organization Science*, 9 (5), 605-22.

Bastian, Brock and Nick Haslam (2011), "Experiencing Dehumanization: Cognitive and Emotional Effects of Everyday Dehumanization," *Basic and Applied Social Psychology*, 33 (4), 295-303.

Bastian, Brock, Jolanda Jetten, and Nick Haslam (2014), "An Interpersonal Perspective on Dehumanization," in *Humanness and Dehumanization*, Paul G. Bain and Jeroen Vaes and Jacques-Philippe Leyens, eds. New York: Taylor and Francis Group.

Bastian, Brock, Simon M. Laham, Sam Wilson, Nick Haslam, and Peter Koval (2011), "Blaming, Praising, and Protecting Our Humanity: The Implications of Everyday Dehumanization for Judgments of Moral Status," *British Journal of Social Psychology*, 50 (3), 469-83.

Batson, C. Daniel, Jakob Håkansson Eklund, Valerie L. Chermok, Jennifer L. Hoyt, and Biaggio G. Ortiz (2007), "An Additional Antecedent of Empathic Concern: Valuing the Welfare of the Person in Need," *Journal of Personality and Social Psychology*, 93 (1), 65-74.

BBC News (2018), "British Bar Workers in Majorca 'at Risk of Modern Slavery'," (accessed August 22, 2018), [available at https://www.bbc.co.uk/news/uk-44252095].

Beal, Daniel J., John P. Trougakos, Howard M. Weiss, and Stephen G. Green (2006), "Episodic Processes in Emotional Labor: Perceptions of Affective Delivery and Regulation Strategies," *Journal of Applied Psychology*, 91 (5), 1053-65.

Bearden, William O., Manoj K. Malhotra, and Kelly H. Uscátegui (1998), "Customer Contact and the Evaluation of Service Experiences: Propositions and Implications for the Design of Services," *Psychology & Marketing*, 15 (8), 793-809.

Beatty, Sharon E. and Scott M. Smith (1987), "External Search Effort: An Investigation across Several Product Categories," *Journal of Consumer Research*, 14 (1), 83-95.

Belk, Russell (2016), "Anthropomorphism and Anthropocentrism," *ACR North American Advances*, 44, 42-47.

Bell, Chris M and Careen Khoury (2011), "Dehumanization, Deindividuation, Anomie and Organizational Justice," *Emerging perspectives on organizational justice and ethics, research in social issues in management*, 7, 169-200.

Bell, Chris M. and Careen Khoury (2016), "Organizational Powerlessness, Dehumanization, and Gendered Effects of Procedural Justice," *Journal of Managerial Psychology*, 31 (2), 570-85.

Benoit, Kenneth and Michael Laver (2006), Party Policy in Modern Democracies. London: Routledge.

Benton, Ted and Ian Craib (2010), Philosophy of Social Science: The Philosophical Foundations of Social Thought (2nd ed.). London: Macmillan International Higher Education.

Berger, Jonah, Ashlee Humphreys, Stephan Ludwig, Wendy W. Moe, Oded Netzer, and David A. Schweidel (2020), "Uniting the Tribes: Using Text for Marketing Insight," *Journal of Marketing*, 84 (1), 1-25.

Bhave, Devasheesh P. and Theresa M. Glomb (2016), "The Role of Occupational Emotional Labor Requirements on the Surface Acting–Job Satisfaction Relationship," *Journal of Management*, 42 (3), 722-41.

Bilsky, Wolfgang, Michael Janik, and Shalom H. Schwartz (2011), "The Structural Organization of Human Values-Evidence from Three Rounds of the European Social Survey (Ess)," *Journal of Cross-Cultural Psychology*, 42 (5), 759-76.

Blauner, Robert (1964), Alienation and Freedom: The Factory Worker and His Industry. Chicago: University of Chicago Press.

Bohannon, John (2016), "Mechanical Turk Upends Social Sciences," *Science*, 352 (6291), 1263-64.

Bojanowski, Piotr, Edouard Grave, Armand Joulin, and Tomas Mikolov (2017), "Enriching Word Vectors with Subword Information," *Transactions of the Association for Computational Linguistics*, 5, 135-46.

Boyle, Sian, Glen Keogh, and Paul Bentley (2017), "Ryanair Bosses 'Don't Treat Crew Like Humans': Air Stewardess Reveals How She Was Forced to Sell More Snacks to Be Closer to Her Ill Grandmother as Staff Tell of Their Appalling Treatment," (accessed April 15, 2020), [available at https://www.dailymail.co.uk/news/article-5192355/Ryanair-bosses-dont-treat-crew-like-humans-say-staff.html].

Braithwaite, Valerie (1998), "The Value Orientations Underlying Liberalism-Conservatism," *Personality and Individual Differences*, 25 (3), 575-89.

Brosch, Tobias and David Sander (2013), "Neurocognitive Mechanisms Underlying

    Value-Based Decision-Making: From Core Values to Economic Value," *Frontiers*

    in Human Neuroscience, 7 (398).

Bruneau, Emile, Nir Jacoby, Nour Kteily, and Rebecca Saxe (2018a), "Denying

    Humanity: The Distinct Neural Correlates of Blatant Dehumanization," *Journal of*

    Experimental Psychology: General, 147 (7), 1078-93.

Bruneau, Emile, Nour Kteily, and Lasse Laustsen (2018b), "The Unique Effects of

    Blatant Dehumanization on Attitudes and Behavior Towards Muslim Refugees

    During the European 'Refugee Crisis' across Four Countries," *European Journal*

    of Social Psychology, 48 (5), 645-62.

Buhrmester, Michael, Tracy Kwang, and Samuel D. Gosling (2016), Amazon's

    Mechanical Turk: A New Source of Inexpensive, yet High-Quality Data? (4th

    ed.). Washington, DC: American Psychological Association.

Butler, Sarah (2018), "Amazon Accused of Treating Uk Warehouse Staff Like Robots,"

    (accessed August 1, 2019), [available at

    https://www.theguardian.com/business/2018/may/31/amazon-accused-of-treating-

    uk-warehouse-staff-like-robots].

Cacioppo, John T. and Richard E. Petty (1982), "The Need for Cognition," *Journal of*

    Personality and Social Psychology, 42 (1), 116-31.

Caesens, Gaëtane, Nathan Nguyen, and Florence Stinglhamber (2019), "Abusive

    Supervision and Organizational Dehumanization," *Journal of Business and*

    Psychology, 34 (5), 709-28.

Caesens, Gaëtane, Florence Stinglhamber, Stéphanie Demoulin, and Matthias De Wilde

    (2017), "Perceived Organizational Support and Employees' Well-Being: The

Mediating Role of Organizational Dehumanization," *European Journal of Work and Organizational Psychology*, 26 (4), 527-40.

Cameron, C. Daryl, Lasana T. Harris, and B. Keith Payne (2016), "The Emotional Cost of Humanity:Anticipated Exhaustion Motivates Dehumanization of Stigmatized Targets," *Social Psychological and Personality Science*, 7 (2), 105-12.

Cameron, Trudy A. and Michelle D. James (1987), "Estimating Willingness to Pay from Survey Data: An Alternative Pre-Test-Market Evaluation Procedure," *Journal of Marketing Research*, 24 (4), 389-95.

Caprara, Gian Vittorio, Shalom Schwartz, Cristina Capanna, Michele Vecchione, and Claudio Barbaranelli (2006), "Personality and Politics: Values, Traits, and Political Choice," *Political Psychology*, 27 (1), 1-28.

Carmines, Edward G. and Nicholas J. D'Amico (2015), "The New Look in Political Ideology Research," *Annual Review of Political Science*, 18 (1), 205-16.

Carnap, Rudolf (1962), Logical Foundations of Probability. Chicago: University of Chicago Press.

Carney, Dana R., John T. Jost, Samuel D. Gosling, and Jeff Potter (2008), "The Secret Lives of Liberals and Conservatives: Personality Profiles, Interaction Styles, and the Things They Leave Behind," *Political Psychology*, 29 (6), 807-40.

Castelo, Noah, Bernd Schmitt, and Miklos Sarvary (2019), "Human or Robot? Consumer Responses to Radical Cognitive Enhancement Products," *Journal of the Association for Consumer Research*, 4 (3), 217-30.

Čehajić, Sabina, Rupert Brown, and Roberto González (2009), "What Do I Care? Perceived Ingroup Responsibility and Dehumanization as Predictors of Empathy Felt for the Victim Group," *Group Processes & Intergroup Relations*, 12 (6), 715-29.

Chan, Eugene Y. (2020), "Political Conservatism and Anthropomorphism: An Investigation," *Journal of Consumer Psychology*, 30 (3), 515-24.

Chan, Eugene Y. and Jasmina Ilicic (2019), "Political Ideology and Brand Attachment," *International Journal of Research in Marketing*, 36 (4), 630-46.

Chase, R. B. (1978), "Where Does the Customer Fit in a Service Operation?," *Harvard business review*, 56 (6), 137-42.

Chase, Richard B. (1981), "The Customer Contact Approach to Services: Theoretical Bases and Practical Extensions," *Operations Research*, 29 (4), 698-706.

Chen, Yang, Dong Liu, Guiyao Tang, and Toschia M. Hogan (2021), "Workplace Events and Employee Creativity: A Multistudy Field Investigation," *Personnel Psychology*, 74 (2), 211-36.

Cheshin, Arik, Adi Amit, and Gerben A. van Kleef (2018), "The Interpersonal Effects of Emotion Intensity in Customer Service: Perceived Appropriateness and Authenticity of Attendants' Emotional Displays Shape Customer Trust and Satisfaction," *Organizational Behavior and Human Decision Processes*, 144, 97-111.

Chiu, Shu-I and Kuo-Wei Hsu (2018), "Predicting Political Tendency of Posts on Facebook," in Proceedings of the 2018 7th International Conference on Software and Computer Applications. Kuantan, Malaysia: Association for Computing Machinery.

Cichocka, Aleksandra, Michał Bilewicz, John T. Jost, Natasza Marrouch, and Marta Witkowska (2016), "On the Grammar of Politics—or Why Conservatives Prefer Nouns," *Political Psychology*, 37 (6), 799-815.

Ciuchta, Michael P., Jay O'Toole, and Anne S. Miner (2021), "The Organizational Improvisation Landscape: Taking Stock and Looking Forward," *Journal of Management*, 47 (1), 288-316.

Collobert, Ronan, Jason Weston, Léon Bottou, Michael Karlen, Koray Kavukcuoglu, and Pavel Kuksa (2011), "Natural Language Processing (Almost) from Scratch," *Journal of machine learning research*, 12, 2493− 537.

Conover, Michael D., Jacob Ratkiewicz, Matthew Francisco, Bruno Gonçalves, Filippo Menczer, and Alessandro Flammini (2011), "Political Polarization on Twitter," in Fifth international AAAI conference on weblogs and social media.

Conway, Lucian Gideon, Laura Janelle Gornick, Shannon C. Houck, Christopher Anderson, Jennifer Stockert, Diana Sessoms, and Kevin McCue (2016), "Are Conservatives Really More Simple-Minded Than Liberals? The Domain Specificity of Complex Thinking," *Political Psychology*, 37 (6), 777-98.

Conway, Lucian Gideon, Shannon C Houck, Laura Janelle Gornick, and Meredith A Repke (2018), "Finding the Loch Ness Monster: Left-Wing Authoritarianism in the United States," *Political Psychology*, 39 (5), 1049-67.

Coser, Lewis A. (1971), Masters of Sociological Thought: Ideas in Historical and Social Context. Boston, Massachusetts: Houghton Mifflin Harcourt P.

Costello, Kimberly and Gordon Hodson (2010), "Exploring the Roots of Dehumanization: The Role of Animal—Human Similarity in Promoting Immigrant Humanization," *Group Processes & Intergroup Relations*, 13 (1), 3-22.

Côté, Stéphane, Ivona Hideg, and Gerben A. van Kleef (2013), "The Consequences of Faking Anger in Negotiations," *Journal of Experimental Social Psychology*, 49 (3), 453-63.

Crawford, Jarret T., Mark J. Brandt, Yoel Inbar, John R. Chambers, and Matt Motyl (2017), "Social and Economic Ideologies Differentially Predict Prejudice across the Political Spectrum, but Social Issues Are Most Divisive," *Journal of Personality and Social Psychology*, 112 (3), 383-412.

Crockett, David and Melanie Wallendorf (2004), "The Role of Normative Political Ideology in Consumer Behavior," *Journal of Consumer Research*, 31 (3), 511-28.

Crump, Matthew J. C., John V. McDonnell, and Todd M. Gureckis (2013), "Evaluating Amazon's Mechanical Turk as a Tool for Experimental Behavioral Research," *PLOS ONE*, 8 (3), e57410.

Cuddy, Amy J. C., Mindi S. Rock, and Michael I. Norton (2007), "Aid in the Aftermath of Hurricane Katrina: Inferences of Secondary Emotions and Intergroup Helping," *Group Processes & Intergroup Relations*, 10 (1), 107-18.

Davidov, Eldad, Peter Schmidt, and Shalom H. Schwartz (2008), "Bringing Values Back In: The Adequacy of the European Social Survey to Measure Values in 20 Countries," *Public Opinion Quarterly*, 72 (3), 420-45.

Davvetas, Vasileios and Adamantios Diamantopoulos (2016), "How Product Category Shapes Preferences toward Global and Local Brands: A Schema Theory Perspective," *Journal of International Marketing*, 24 (4), 61-81.

Davvetas, Vasileios and Georgios Halkias (2019), "Global and Local Brand Stereotypes: Formation, Content Transfer, and Impact," *International Marketing Review*, 36 (5), 675-701.

De Clercq, Stefaan, Johnny R. J. Fontaine, and Frederik Anseel (2008), "In Search of a Comprehensive Value Model for Assessing Supplementary Person—Organization Fit," *The Journal of Psychology*, 142 (3), 277-302.

De Zavala, Agnieszka Golec, Aleksandra Cislak, and Elzbieta Wesolowska (2010), "Political Conservatism, Need for Cognitive Closure, and Intergroup Hostility," *Political Psychology*, 31 (4), 521-41.

Demoulin, Stéphanie, Jacques-Philippe Leyens, Maria-Paola Paladino, Ramón Rodriguez-Torres, Armando Rodriguez-Perez, and John Dovidio (2004), "Dimensions of "Uniquely" and "Non-Uniquely" Human Emotions," *Cognition and Emotion*, 18 (1), 71-96.

Devos, Thierry, Dario Spini, and Shalom H Schwartz (2002), "Conflicts among Human Values and Trust in Institutions," *British Journal of Social Psychology*, 41 (4), 481-94.

Donnelly, James H. and John M. Ivancevich (1975), "Role Clarity and the Salesman:An Empirical Study Reveals That Perceived Role Clarity May Be an Important Factor in Maximizing a Salesman's Job Performance," *Journal of Marketing*, 39 (1), 71-74.

Du, Jiangang, Xiucheng Fan, and Tianjun Feng (2014), "Group Emotional Contagion and Complaint Intentions in Group Service Failure:The Role of Group Size and Group Familiarity," *Journal of Service Research*, 17 (3), 326-38.

Dumais, Susan, John Platt, David Heckerman, and Mehran Sahami (1998), "Inductive Learning Algorithms and Representations for Text Categorization," in Proceedings of the seventh international conference on Information and knowledge management.

Easterby-Smith, Mark, Richard Thorpe, and Paul R. Jackson (2012), Management Research. London: Sage Publications.

Eidelman, Scott, Christian S. Crandall, Jeffrey A. Goodman, and John C. Blanchar (2012), "Low-Effort Thought Promotes Political Conservatism," *Personality and Social Psychology Bulletin*, 38 (6), 808-20.

Elwell, Frank W. (1999), Industrializing America: Understanding Contemporary Society through Classical Sociological Analysis. Wesport, Connecticut: Praeger Publishers.

Epstein, Seymour (1984), "Controversial Issues in Emotion Theory," *Review of Personality & Social Psychology*, 5, 64-88.

Erikson, R. S. and K. L. Tedin (2003), American Public Opinion (6th ed.). New York: Longman.

Eysenck, Hans J. (1955), The Psychology of Politics. New York: Routledge.

Fang, Anjie, Iadh Ounis, Philip Habel, Craig Macdonald, and Nut Limsopatham (2015), "Topic-Centric Classification of Twitter User's Political Orientation," in Proceedings of the 38th International ACM SIGIR Conference on Research and Development in Information Retrieval. Santiago, Chile: Association for Computing Machinery.

Farmer, Adam, Blair Kidwell, and David M. Hardesty (2020a), "Helping a Few a Lot or Many a Little: Political Ideology and Charitable Giving," *Journal of Consumer Psychology*, 30 (4), 614-30.

---- (2020b), "The Politics of Choice: Political Ideology and Intolerance of Ambiguity," *Journal of Consumer Psychology*, 31 (1), 6– 21.

Fastoso, Fernando and Héctor González-Jiménez (2020), "Materialism, Cosmopolitanism, and Emotional Brand Attachment: The Roles of Ideal Self-Congruity and Perceived Brand Globalness," *Journal of Business Research*, 121, 429-37.

Feldman, Stanley and Christopher Johnston (2014), "Understanding the Determinants of Political Ideology: Implications of Structural Complexity," *Political Psychology*, 35 (3), 337-58.

Fernandes, Daniel and Naomi Mandel (2014), "Political Conservatism and Variety-Seeking," *Journal of Consumer Psychology*, 24 (1), 79-86.

Fiske, Susan T., Amy J. C. Cuddy, and Peter Glick (2007), "Universal Dimensions of Social Cognition: Warmth and Competence," *Trends in Cognitive Sciences*, 11 (2), 77-83.

Fiske, Susan T., Amy J. C. Cuddy, Peter Glick, and Jun Xu (2002), "A Model of (Often Mixed) Stereotype Content: Competence and Warmth Respectively Follow from Perceived Status and Competition," *Journal of Personality and Social Psychology*, 82 (6), 878-902.

Freund, Julien (1968), The Sociology of Max Weber. London: Allen Lane.

Fromm, Erich (1974), "Isman Lazy by Nature?," in *The Pathology of Normalcy*, Erich Fromm, ed. Herndon: Lantern Books.

Gabbott, Mark, Yelena Tsarenko, and Wai Hoe Mok (2011), "Emotional Intelligence as a Moderator of Coping Strategies and Service Outcomes in Circumstances of Service Failure," *Journal of Service Research*, 14 (2), 234-48.

Ger, Guliz (1999), "Localizing in the Global Village: Local Firms Competing in Global Markets," *California Management Review*, 41 (4), 64-83.

Global Strategy Group (2014), "Business and Politics: Do They Mix?," Global Strategy Group.

Goff, Phillip Atiba, Jennifer L. Eberhardt, Melissa J. Williams, and Matthew Christian Jackson (2008), "Not yet Human: Implicit Knowledge, Historical

Dehumanization, and Contemporary Consequences," *Journal of personality and social psychology*, 94 (2), 292.

Goldman, Emma and Candace Falk (2003), Emma Goldman: A Documentary History of the American Years, Volume One: Made for America, 1890-1901. Berkeley: University of California Press.

Goodman, Joseph K and Gabriele Paolacci (2017), "Crowdsourcing Consumer Research," *Journal of Consumer Research*, 44 (1), 196-210.

Google Books Ngram Viewer (2021), (accessed December 15, 2020), [available at https://books.google.com/ngrams/graph?content=dehumanization%2Ccapitalist+system&year_start=1880&year_end=2019&corpus=26&smoothing=3].

Graham, Jesse, Jonathan Haidt, and Brian A. Nosek (2009), "Liberals and Conservatives Rely on Different Sets of Moral Foundations," *Journal of Personality and Social Psychology*, 96 (5), 1029–46.

Grandey, Alicia A., Glenda M. Fisk, Anna S. Mattila, Karen J. Jansen, and Lori A. Sideman (2005), "Is "Service with a Smile" Enough? Authenticity of Positive Displays During Service Encounters," *Organizational Behavior and Human Decision Processes*, 96 (1), 38-55.

Grandey, Alicia A. and Allison S. Gabriel (2015), "Emotional Labor at a Crossroads: Where Do We Go from Here?," *Annual Review of Organizational Psychology and Organizational Behavior*, 2 (1), 323-49.

Gray, Heather M., Kurt Gray, and Daniel M. Wegner (2007), "Dimensions of Mind Perception," *Science*, 315 (5812), 619-19.

Greenberg, Jeff and Eva Jonas (2003), "Psychological Motives and Political Orientation--the Left, the Right, and the Rigid: Comment on Jost Et Al. (2003)," *Psychological Bulletin*, 129 (3), 376-82.

Greenhalgh, Elizabeth M and Susan E Watt (2015), "Preference for Consistency and Value Dissimilarities in Dehumanization and Prejudice toward Asylum Seekers in Australia," *European Journal of Social Psychology*, 45 (1), 110-19.

Groth, Markus, Thorsten Hennig-Thurau, and Gianfranco Walsh (2009), "Customer Reactions to Emotional Labor: The Roles of Employee Acting Strategies and Customer Detection Accuracy," *Academy of Management Journal*, 52 (5), 958-74.

Guendelsberger, Emily (2019), "I Worked at an Amazon Fulfillment Center; They Treat Workers Like Robots," (accessed April 15, 2020), [available at https://news.yahoo.com/worked-amazon-fulfillment-center-treat-093655850.html].

Hackman, J. Richard and Greg R. Oldham (1975), "Development of the Job Diagnostic Survey," *Journal of Applied Psychology*, 60 (2), 159-70.

Hair, Joseph, William Black, Barry Babin, and Rolph Anderson (2009), Multivariate Data Analysis (7th Edition ed.). Upper Saddle River: Prentice-Hall.

Halfpenny, Peter (1982), Positivism and Sociology: Explaining Social Life. Milton Park, Oxfordshire: Taylor & Francis.

Han, Kyuhong, Jihye Jung, Vikas Mittal, Jinyong Daniel Zyung, and Hajo Adam (2019), "Political Identity and Financial Risk Taking: Insights from Social Dominance Orientation," *Journal of Marketing Research*, 56 (4), 581-601.

Hanfling, Oswald (1981), Logical Positivism. New York: Columbia University Press.

Hansson, Robert O., John P. Keating, and Carmen Terry (1974), "The Effects of Mandatory Time Limits in the Voting Booth on Liberal-Conservative Voting Patterns," *Journal of Applied Social Psychology*, 4 (4), 336-42.

Haque, Omar Sultan and Adam Waytz (2012), "Dehumanization in Medicine: Causes, Solutions, and Functions," *Perspectives on Psychological Science*, 7 (2), 176-86.

Harris, Lasana T. and Susan T. Fiske (2006), "Dehumanizing the Lowest of the

Low:Neuroimaging Responses to Extreme out-Groups," *Psychological Science*,

17 (10), 847-53.

Hartmann, Jochen, Juliana Huppertz, Christina Schamp, and Mark Heitmann (2019),

"Comparing Automated Text Classification Methods," *International Journal of

Research in Marketing*, 36 (1), 20-38.

Haslam, Nick (2006), "Dehumanization: An Integrative Review," *Personality and

Social Psychology Review*, 10 (3), 252-64.

Haslam, Nick, Paul Bain, Lauren Douge, Max Lee, and Brock Bastian (2005), "More

Human Than You: Attributing Humanness to Self and Others," *Journal of

personality and social psychology*, 89 (6), 937.

Haslam, Nick, Brock Bastian, and Melanie Bissett (2004), "Essentialist Beliefs About

Personality and Their Implications," *Personality and Social Psychology Bulletin*,

30 (12), 1661-73.

Haslam, Nick and Steve Loughnan (2014), "Dehumanization and Infrahumanization,"

Annual Review of Psychology, 65 (1), 399-423.

Haslam, Nick and Michelle Stratemeyer (2016), "Recent Research on Dehumanization,"

Current Opinion in Psychology, 11, 25-29.

Hayes, Andrew F. (2017), Introduction to Mediation, Moderation, and Conditional

Process Analysis: A Regression-Based Approach. New York: Guilford

Publications.

Hayes, Andrew F. and Klaus Krippendorff (2007), "Answering the Call for a Standard

Reliability Measure for Coding Data," *Communication Methods and Measures*, 1

(1), 77-89.

Heffernan, Margaret (2020), "Treat Workers Like Robots and They Might Behave Like Them," (accessed March 15, 2020), [available at https://www.ft.com/content/a6e4b886-56e8-11ea-abe5-8e03987b7b20].

Heflick, Nathan A., Jamie L. Goldenberg, Douglas P. Cooper, and Elisa Puvia (2011), "From Women to Objects: Appearance Focus, Target Gender, and Perceptions of Warmth, Morality and Competence," *Journal of Experimental Social Psychology*, 47 (3), 572-81.

Heim, Gregory R. and Kingshuk K. Sinha (2005), "Service Product Configurations in Electronic Business-to-Consumer Operations:A Taxonomic Analysis of Electronic Food Retailers," *Journal of Service Research*, 7 (4), 360-76.

Henkel, A. P., J. Boegershausen, J. Hoegg, K. Aquino, and J. Lemmink (2018), "Discounting Humanity: When Consumers Are Price Conscious, Employees Appear Less Human," *Journal of Consumer Psychology*, 28 (2), 272-92.

Hennig-Thurau, Thorsten, Markus Groth, Michael Paul, and Dwayne D Gremler (2006), "Are All Smiles Created Equal? How Emotional Contagion and Emotional Labor Affect Service Relationships," *Journal of Marketing*, 70 (3), 58-73.

Hennig-Thurau, Thorsten, Caroline Wiertz, and Fabian Feldhaus (2015), "Does Twitter Matter? The Impact of Microblogging Word of Mouth on Consumers' Adoption of New Movies," *Journal of the Academy of Marketing Science*, 43 (3), 375-94.

Herak, Iskra, Nicolas Kervyn, and Matthew Thomson (2020), "Pairing People with Products: Anthropomorphizing the Object, Dehumanizing the Person," *Journal of Consumer Psychology*, 30 (1), 125-39.

Heskett, James L, Thomas O Jones, Gary W Loveman, W Earl Sasser, and Leonard A Schlesinger (1994), "Putting the Service-Profit Chain to Work," *Harvard business review*, 72 (2), 164-74.

Hetherington, Marc J. (2001), "Resurgent Mass Partisanship: The Role of Elite Polarization," *The American Political Science Review*, 95 (3), 619-31.

Hill, Ronald Paul, Daniel Cunningham, and Gramercy Gentlemen (2016), "Dehumanization and Restriction inside a Maximum Security Prison: Novel Insights About Consumer Acquisition and Ownership," *Journal of the Association for Consumer Research*, 1 (2), 295-313.

Hochreiter, Sepp and Jürgen Schmidhuber (1997), "Long Short-Term Memory," *Neural Computation*, 9 (8), 1735-80.

Hochschild, Arlie Russell (1983), The Managed Heart: Commercialization of Human Feeling. Berkeley, CA: University of California Press.

Hodson, Gordon and Kimberly Costello (2007), "Interpersonal Disgust, Ideological Orientations, and Dehumanization as Predictors of Intergroup Attitudes," *Psychological Science*, 18 (8), 691-98.

Homburg, Christian, Laura Ehm, and Martin Artz (2015), "Measuring and Managing Consumer Sentiment in an Online Community Environment," *Journal of Marketing Research*, 52 (5), 629-41.

Homburg, Christian, Nicole Koschate, and Wayne D. Hoyer (2005), "Do Satisfied Customers Really Pay More? A Study of the Relationship between Customer Satisfaction and Willingness to Pay," *Journal of Marketing*, 69 (2), 84-96.

Howard, Daniel J. and Charles Gengler (2001), "Emotional Contagion Effects on Product Attitudes," *Journal of Consumer Research*, 28 (2), 189-201.

Huang, Dongling and Lan Luo (2016), "Consumer Preference Elicitation of Complex Products Using Fuzzy Support Vector Machine Active Learning," *Marketing Science*, 35 (3), 445-64.

Huang, Ming-Hui and Roland T. Rust (2017), "Technology-Driven Service Strategy," *Journal of the Academy of Marketing Science*, 45 (6), 906-24.

Hudson, Laurel Anderson and Julie L. Ozanne (1988), "Alternative Ways of Seeking Knowledge in Consumer Research," *Journal of Consumer Research*, 14 (4), 508-21.

Hülsheger, U. R. and A. F. Schewe (2011), "On the Costs and Benefits of Emotional Labor: A Meta-Analysis of Three Decades of Research," *Journal of Occupational Health Psychology*, 16 (3), 361-89.

Hume, David (1748), An Enquiry Concerning Human Understanding (2000 Ed.). New York: Oxford University Press.

Hunt, Shelby D. (1991), "Positivism and Paradigm Dominance in Consumer Research: Toward Critical Pluralism and Rapprochement," *Journal of Consumer Research*, 18 (1), 32-44.

Huyghebaert, Tiphaine, Nicolas Gillet, Claude Fernet, Fadi-Joseph Lahiani, Séverine Chevalier, and Evelyne Fouquereau (2018), "Investigating the Longitudinal Effects of Surface Acting on Managers' Functioning through Psychological Needs," *Journal of Occupational Health Psychology*, 23 (2), 207-22.

Ignatow, Gabe and Rada Mihalcea (2016), Text Mining: A Guidebook for the Social Sciences. London: Sage Publications.

Irmak, Caglar, Mitchel R. Murdock, and Vamsi K. Kanuri (2020), "When Consumption Regulations Backfire: The Role of Political Ideology," *Journal of Marketing Research*, 57 (5), 966-84.

Ivancevich, John M. and Jr. James H. Donnelly (1974), "A Study of Role Clarity and Need for Clarity for Three Occupational Groups," *Academy of Management Journal*, 17 (1), 28-36.

Jack, Anthony I., Abigail J. Dawson, and Megan E. Norr (2013), "Seeing Human: Distinct and Overlapping Neural Signatures Associated with Two Forms of Dehumanization," *NeuroImage*, 79, 313-28.

Jeong, Ji Youn, Jungkun Park, and Hyowon Hyun (2019), "The Role of Emotional Service Expectation toward Perceived Quality and Satisfaction: Moderating Effects of Deep Acting and Surface Acting," *Frontiers in Psychology*, 10 (321).

Johnson, Hazel-Anne M. and Paul E. Spector (2007), "Service with a Smile: Do Emotional Intelligence, Gender, and Autonomy Moderate the Emotional Labor Process?," *Journal of Occupational Health Psychology*, 12 (4), 319-33.

Jones-Lumby, R and N Haslam (2005), "Dimensions of Humanness and Stereotype Content," in Unpublished data, University of Melbourne, Australia.

Jost, J. T. (2006), "The End of the End of Ideology," *American Psychologist*, 61 (7), 651-70.

Jost, J. T., J. Glaser, A. W. Kruglanski, and F. J. Sulloway (2003a), "Political Conservatism as Motivated Social Cognition," *Psychological Bulletin*, 129 (3), 339-75.

Jost, John and Orsolya Hunyady (2003), "The Psychology of System Justification and the Palliative Function of Ideology," *European review of social psychology*, 13 (1), 111-53.

Jost, John T, Sally Blount, Jeffrey Pfeffer, and György Hunyady (2003b), "Fair Market Ideology: Its Cognitive-Motivational Underpinnings," *Research in organizational behavior*, 25, 53-91.

Jost, John T, Christopher M Federico, and Jaime L Napier (2009), "Political Ideology: Its Structure, Functions, and Elective Affinities," *Annual review of psychology*, 60, 307-37.

Jost, John T. (2017a), "Ideological Asymmetries and the Essence of Political Psychology," *Political Psychology*, 38 (2), 167-208.

---- (2017b), "The Marketplace of Ideology: "Elective Affinities" in Political Psychology and Their Implications for Consumer Behavior," *Journal of Consumer Psychology*, 27 (4), 502-20.

Jost, John T., Elvira Basevich, Eric S. Dickson, and Sharareh Noorbaloochi (2016), "The Place of Values in a World of Politics: Personality, Motivation, and Ideology," in *Handbook of Value: Perspectives from Economics, Neuroscience, Philosophy, Psychology, and Sociology*, Tobias Brosch and David Sander, eds. Oxford: Oxford University Press.

Jost, John T., Christopher M. Federico, and Jaime L. Napier (2013), "Political Ideologies and Their Social Psychological Functions," in *The Oxford Handbook of Political Ideologies*, Michael Freeden and Lyman Tower Sargent and Marc Stears, eds. New York: Oxford University Press.

Jost, John T., Brian A. Nosek, and Samuel D. Gosling (2008), "Ideology: Its Resurgence in Social, Personality, and Political Psychology," *Perspectives on Psychological Science*, 3 (2), 126-36.

Jost, John T., Joanna Sterling, and Chadly Stern (2017), "Getting Closure on Conservatism, or the Politics of Epistemic and Existential Motivation," in *The Motivation-Cognition Interface; from the Lab to the Real World: A Festschrift in Honor of Arie W. Kruglanski*, Catalina E. Kopetz and Ayelet Fishbach, eds. Milton Park, Oxfordshire: Routledge.

Jung, Jihye and Vikas Mittal (2020), "Political Identity and the Consumer Journey: A Research Review," *Journal of Retailing*, 96 (1), 55-73.

Jung, Kiju, Ellen Garbarino, Donnel A Briley, and Jesse Wynhausen (2017a), "Blue and Red Voices: Effects of Political Ideology on Consumers' Complaining and Disputing Behavior," *Journal of Consumer Research*, 44 (3), 477-99.

---- (2017b), "Political Ideology and Consumer Research Beyond Complaining Behavior: A Response to the Commentaries," *Journal of Consumer Research*, 44 (3), 511-18.

Jurafsky, Dan (2008), Speech and Language Processing: International Edition. London: Pearson.

Kaikati, Andrew M., Carlos J. Torelli, Karen Page Winterich, and María A. Rodas (2017), "Conforming Conservatives: How Salient Social Identities Can Increase Donations," *Journal of Consumer Psychology*, 27 (4), 422-34.

Kantor, Jodi and David Streitfeld (2015), "Inside Amazon: Wrestling Big Ideas in a Bruising Workplace," (accessed August 30, 2018), [available at https://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html].

Kauppila, Olli-Pekka (2014), "So, What Am I Supposed to Do? A Multilevel Examination of Role Clarity," *Journal of Management Studies*, 51 (5), 737-63.

Kelemen, László, Zsolt Péter Szabó, Noémi Zsuzsanna Mészáros, János László, and Josef P. Forgas (2014), "Social Cognition and Democracy: The Relationship between System Justification, Just World Beliefs, Authoritarianism, Need for Closure, and Need for Cognition in Hungary," *Journal of Social and Political Psychology*, 2 (1), 197-219.

Kelman, Herbert C. (1961), "Processes of Opinion Change," *Public Opinion Quarterly*, 25 (1), 57-78.

Kelman, Herbert G. (1973), "Violence without Moral Restraint: Reflections on the Dehumanization of Victims and Victimizers," *Journal of Social Issues*, 29 (4), 25-61.

Kerlinger, F. N. (1966), Foundations of Behavioral Research. New York: Holt, Rinehart and Winston.

Khan, Romana, Kanishka Misra, and Vishal Singh (2013), "Ideology and Brand Consumption," *Psychological Science*, 24 (3), 326-33.

Kidwell, Blair, Adam Farmer, and David M. Hardesty (2013), "Getting Liberals and Conservatives to Go Green: Political Ideology and Congruent Appeals," *Journal of Consumer Research*, 40 (2), 350-67.

Kidwell, Blair, David M. Hardesty, Brian R. Murtha, and Shibin Sheng (2011), "Emotional Intelligence in Marketing Exchanges," *Journal of Marketing*, 75 (1), 78-95.

Kim, Jeehye Christine, Brian Park, and David Dubois (2018), "How Consumers' Political Ideology and Status-Maintenance Goals Interact to Shape Their Desire for Luxury Goods," *Journal of Marketing*, 82 (6), 132-49.

Kim, Yoon (2014), "Convolutional Neural Networks for Sentence Classification," *arXiv preprint arXiv:1408.5882*.

Kohavi, R. (1995), "A Study of Cross-Validation and Bootstrap for Accuracy Estimation and Model Selection," in IJCAI.

Kohli, Ajay K. (1985), "Some Unexplored Supervisory Behaviors and Their Influence on Salespeople's Role Clarity, Specific Self- Esteem, Job Satisfaction, and Motivation," *Journal of Marketing Research*, 22 (4), 424-33.

Kolbl, Živa, Maja Arslanagic-Kalajdzic, and Adamantios Diamantopoulos (2019), "Stereotyping Global Brands: Is Warmth More Important Than Competence?," *Journal of Business Research*, 104, 614-21.

Korczynski, Marek, Karen Shire, Stephen Frenkel, and May Tam (2000), "Service Work in Consumer Capitalism: Customers, Control and Contradictions," *Work, Employment and Society*, 14 (4), 669-87.

Koschate-Fischer, Nicole, Isabel V Stefan, and Wayne D Hoyer (2012), "Willingness to Pay for Cause-Related Marketing: The Impact of Donation Amount and Moderating Effects," *Journal of marketing research*, 49 (6), 910-27.

Kothe, Emily and Mathew Ling (2019), "Retention of Participants Recruited to a One-Year Longitudinal Study Via Prolific," [available at https://doi.org/10.31234/osf.io/5yv2u].

Kotler, Philip (2015), Confronting Capitalism: Real Solutions for a Troubled Economic System. New York: Amacom.

Kovács, Balázs, Glenn R. Carroll, and David W. Lehman (2014), "Authenticity and Consumer Value Ratings: Empirical Tests from the Restaurant Domain," *Organization Science*, 25 (2), 458-78.

Kozak, Megan N., Abigail A. Marsh, and Daniel M. Wegner (2006), "What Do I Think You're Doing? Action Identification and Mind Attribution," *Journal of Personality and Social Psychology*, 90 (4), 543-55.

Krannitz, Morgan A., Alicia A. Grandey, Songqi Liu, and David A. Almeida (2015), "Workplace Surface Acting and Marital Partner Discontent: Anxiety and Exhaustion Spillover Mechanisms," *Journal of occupational health psychology*, 20 (3), 314-25.

Kristensen, Jakob Bæk, Thomas Albrechtsen, Emil Dahl-Nielsen, Michael Jensen, Magnus Skovrind, and Tobias Bornakke (2017), "Parsimonious Data: How a Single Facebook Like Predicts Voting Behavior in Multiparty Systems," *PLOS ONE*, 12 (9), e0184562.

Kteily, Nour and Emile Bruneau (2017a), "Backlash:The Politics and Real-World Consequences of Minority Group Dehumanization," *Personality and Social Psychology Bulletin*, 43 (1), 87-104.

Kteily, Nour, Emile Bruneau, Adam Waytz, and Sarah Cotterill (2015), "The Ascent of Man: Theoretical and Empirical Evidence for Blatant Dehumanization," *Journal of personality and social psychology*, 109 (5), 901.

Kteily, Nour S. and Emile Bruneau (2017b), "Darker Demons of Our Nature: The Need to (Re)Focus Attention on Blatant Forms of Dehumanization," *Current Directions in Psychological Science*, 26 (6), 487-94.

Kübler, Raoul V., Anatoli Colicev, and Koen H. Pauwels (2020), "Social Media's Impact on the Consumer Mindset: When to Use Which Sentiment Extraction Tool?," *Journal of Interactive Marketing*, 50, 136-55.

Lam, Shun Yin, Venkatesh Shankar, M. Krishna Erramilli, and Bvsan Murthy (2004), "Customer Value, Satisfaction, Loyalty, and Switching Costs: An Illustration from a Business-to-Business Service Context," *Journal of the Academy of Marketing Science*, 32 (3), 293-311.

Lammers, Joris and Diederik A. Stapel (2011), "Power Increases Dehumanization," *Group Processes & Intergroup Relations*, 14 (1), 113-26.

Lang, Jessica, Jeffrey L. Thomas, Paul D. Bliese, and Amy B. Adler (2007), "Job Demands and Job Performance: The Mediating Effect of Psychological and

Physical Strain and the Moderating Effect of Role Clarity," *Journal of occupational health psychology*, 12 (2), 116-24.

Layman, Geoffrey C. and Thomas M. Carsey (2002), "Party Polarization and "Conflict Extension" in the American Electorate," *American Journal of Political Science*, 46 (4), 786-802.

Leetaru, Kalev (2019), "As Workers Are Increasingly Treated Like Robots Where Will the Breaking Point Be?," (accessed August 02, 2019), [available at https://www.forbes.com/sites/kalevleetaru/2019/07/08/as-workers-are-increasingly-treated-like-robots-where-will-the-breaking-point-be/#20fb943b7a51].

Legg, Mark Patrick, Chun-Hung Hugo Tang, and Lisa Slevitch (2012), "Does Political Ideology Play a Role in Destination Choice?," *American Journal of Tourism Research*, 1 (2), 45-58.

Leidner, Bernhard, Emanuele Castano, and Jeremy Ginges (2013), "Dehumanization, Retributive and Restorative Justice, and Aggressive Versus Diplomatic Intergroup Conflict Resolution Strategies," *Personality and Social Psychology Bulletin*, 39 (2), 181-92.

Leidner, Robin (1993), Fast Food, Fast Talk: Service Work and the Routinization of Everyday Life. Berkeley, C.A: University of California Press.

Leung, Eugina, Gabriele Paolacci, and Stefano Puntoni (2018), "Man Versus Machine: Resisting Automation in Identity-Based Consumer Behavior," *Journal of Marketing Research*, 55 (6), 818-31.

Leyens, Jacques-Philippe, Stéphanie Demoulin, Jeroen Vaes, Ruth Gaunt, and Maria Paola Paladino (2007), "Infra-Humanization: The Wall of Group Differences," *Social Issues and Policy Review*, 1 (1), 139-72.

Leyens, Jacques-Philippe, Paola M. Paladino, Ramon Rodriguez-Torres, Jeroen Vaes, Stéphanie Demoulin, Armando Rodriguez-Perez, and Ruth Gaunt (2000), "The Emotional Side of Prejudice: The Attribution of Secondary Emotions to Ingroups and Outgroups," *Personality and Social Psychology Review*, 4 (2), 186-97.

Leyens, Jacques-Philippe, Armando Rodriguez-Perez, Ramon Rodriguez-Torres, Ruth Gaunt, Maria-Paola Paladino, Jeroen Vaes, and Stephanie Demoulin (2001), "Psychological Essentialism and the Differential Attribution of Uniquely Human Emotions to Ingroups and Outgroups," *European Journal of Social Psychology*, 31 (4), 395-411.

Liu, Xiao-Yu, Nai-Wen Chi, and Dwayne D. Gremler (2019a), "Emotion Cycles in Services: Emotional Contagion and Emotional Labor Effects," *Journal of Service Research*, 22 (3), 285-300.

Liu, Xiao, Dokyun Lee, and Kannan Srinivasan (2019b), "Large-Scale Cross-Category Analysis of Consumer Review Content on Sales Conversion Leveraging Deep Learning," *Journal of Marketing Research*, 56 (6), 918-43.

Loughnan, Steve, Nick Haslam, Tess Murnane, Jeroen Vaes, Catherine Reynolds, and Caterina Suitner (2010), "Objectification Leads to Depersonalization: The Denial of Mind and Moral Concern to Objectified Others," *European Journal of Social Psychology*, 40 (5), 709-17.

Loughnan, Steve, Nick Haslam, Robbie M. Sutton, and Bettina Spencer (2014), "Dehumanization and Social Class," *Social Psychology*, 45, 54-61.

Lyons, Thomas F. (1971), "Role Clarity, Need for Clarity, Satisfaction, Tension, and Withdrawal," *Organizational Behavior and Human Performance*, 6 (1), 99-110.

MacInnis, Deborah J. and Valerie S. Folkes (2017), "Humanizing Brands: When Brands Seem to Be Like Me, Part of Me, and in a Relationship with Me," *Journal of Consumer Psychology*, 27 (3), 355-74.

Mahdawi, Arwa (2018), "Amazon's Twitter Ambassadors Show Hard Work Isn't Enough – Employers Expect Forced Cheerfulness Too," (accessed August 30, 2019), [available at

https://www.theguardian.com/commentisfree/2018/aug/28/amazon-ambassadors-twitter-hard-work-passion-for-employer].

Maheswaran, Durairaj and Joan Meyers-Levy (1990), "The Influence of Message Framing and Issue Involvement," *Journal of Marketing Research*, 27 (3), 361-67.

Malhotra, N. K., D. F. Birks, and P. Wills (2013), Essentials of Marketing Research. Harlow: Pearson.

Malhotra, Naresh K. and Mark Peterson (2014), Basic Marketing Research. London: Pearson.

Martínez-Iñigo, David, Peter Totterdell, Carlos M. Alcover, and David Holman (2007), "Emotional Labour and Emotional Exhaustion: Interpersonal and Intrapersonal Mechanisms," *Work & Stress*, 21 (1), 30-47.

Martínez, Rocío, Rosa Rodríguez-Bailón, Miguel Moya, and Jeroen Vaes (2017), "Interacting with Dehumanized Others? Only If They Are Objectified," *Group Processes & Intergroup Relations*, 20 (4), 465-82.

Marx, Karl (1844), "Economic and Philosophical Manuscripts." Progress Publishers.

Maslow, A. H. (1954), Motivation and Personality. Oxford: Harpers.

Mason, Paul (2016), "Sports Direct's Staff Are Treated No Better Than Georgian-Era Factory Workers," (accessed March 15, 2020), [available at

https://www.theguardian.com/commentisfree/2016/jul/25/sports-directs-staff-are-treated-no-better-than-georgian-era-factory-workers].

Mason, Winter and Siddharth Suri (2012), "Conducting Behavioral Research on Amazon's Mechanical Turk," *Behavior Research Methods*, 44 (1), 1-23.

McCarthy, Niall (2018), "The Price of a Cup of Coffee Worldwide," (accessed August 12, 2021), [available at https://www.statista.com/chart/14087/the-price-of-a-cup-of-coffee-worldwide/].

Mclaughlin, Kelley (2016), "San Francisco Coffee Shop Sells Cup of Joe for Fifteen Dollars Using Beans That Took Eight Years to Produce - and It's Already Selling Out," (accessed August 15, 2021), [available at https://www.dailymail.co.uk/news/article-3442713/San-Francisco-coffee-shop-sells-cup-joe-15-beans-took-EIGHT-YEARS-produce.html].

Miles, Robert H. and M. M. Petty (1975), "Relationships between Role Clarity, Need for Clarity, and Job Tension and Satisfaction for Supervisory and Nonsupervisory Roles," *Academy of Management Journal*, 18 (4), 877-83.

Morgeson, Frederick P., Kelly Delaney-Klinger, and Monica A. Hemingway (2005), "The Importance of Job Autonomy, Cognitive Ability, and Job-Related Skill for Predicting Role Breadth and Job Performance," *Journal of Applied Psychology*, 90 (2), 399-406.

Murthi, B. P. S. and Sumit Sarkar (2003), "The Role of the Management Sciences in Research on Personalization," *Management Science*, 49 (10), 1344-62.

Ng, Kok-Yee, Soon Ang, and Kim-Yin Chan (2008), "Personality and Leader Effectiveness: A Moderated Mediation Model of Leadership Self-Efficacy, Job Demands, and Job Autonomy," *Journal of Applied Psychology*, 93 (4), 733-43.

Nguyen, Helena, Markus Groth, Gianfranco Walsh, and Thorsten Hennig-Thurau (2014), "The Impact of Service Scripts on Customer Citizenship Behavior and the Moderating Role of Employee Customer Orientation," *Psychology & Marketing*, 31 (12), 1096-109.

Nussbaum, Martha C (1995), "Objectification," *Philosophy & Public Affairs*, 24 (4), 249-91.

Opotow, Susan (1990), "Moral Exclusion and Injustice: An Introduction," *Journal of social issues*, 46 (1), 1-20.

Ordabayeva, Nailya and Daniel Fernandes (2018), "Better or Different? How Political Ideology Shapes Preferences for Differentiation in the Social Hierarchy," *Journal of Consumer Research*, 45 (2), 227-50.

Ordenes, Francisco Villarroel , Dhruv Grewal, Stephan Ludwig, Ko De Ruyter, Dominik Mahr, and Martin Wetzels (2018), "Cutting through Content Clutter: How Speech and Image Acts Drive Consumer Sharing of Social Media Brand Messages," *Journal of Consumer Research*, 45 (5), 988-1012.

Ozcelik, Hakan (2013), "An Empirical Analysis of Surface Acting in Intra-Organizational Relationships," *Journal of Organizational Behavior*, 34 (3), 291-309.

Palan, Stefan and Christian Schitter (2018), "Prolific.Ac—a Subject Pool for Online Experiments," *Journal of Behavioral and Experimental Finance*, 17, 22-27.

Paolacci, Gabriele and Jesse Chandler (2014), "Inside the Turk: Understanding Mechanical Turk as a Participant Pool," *Current Directions in Psychological Science*, 23 (3), 184-88.

Parker, S. K., C. M. Axtell, and N. Turner (2001), "Designing a Safer Workplace: Importance of Job Autonomy, Communication Quality, and Supportive Supervisors," *Journal of occupational health psychology*, 6 (3), 211-28.

Parkinson, Justin (2015), "What's It Really Like to Work at Mcdonald's?," (accessed August 01, 2019), [available at https://www.bbc.co.uk/news/magazine-32283560].

Pennebaker, James W., Ryan L. Boyd, Kayla Jordan, and Kate Blackburn (2015), The Development and Psychometric Properties of Liwc2015. Austin, Texas: University of Texas at Austin.

Peterson, Robert A. and William R. Wilson (1985), "Perceived Risk and Price Reliance Schema as Price-Perceived Quality Mediators," in *Perceived Quality*, Jacob Jacoby and Jerry C. Olson, eds. Lexington, M.A.: Heath.

Piurko, Yuval, Shalom H. Schwartz, and Eldad Davidov (2011), "Basic Personal Values and the Meaning of Left-Right Political Orientations in 20 Countries," *Political Psychology*, 32 (4), 537-61.

Preoţiuc-Pietro, Daniel, Ye Liu, Daniel Hopkins, and Lyle Ungar (2017), "Beyond Binary Labels: Political Ideology Prediction of Twitter Users," in Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers).

Pugh, S. Douglas (2001), "Service with a Smile: Emotional Contagion in the Service Encounter," *Academy of Management Journal*, 44 (5), 1018-27.

Reed, Isaac Ariail (2011), Interpretation and Social Knowledge: On the Use of Theory in the Human Sciences. Berkeley, C.A.: University of Chicago Press.

Reich, Taly, Daniella M Kupor, and Rosanna K Smith (2017), "Made by Mistake: When Mistakes Increase Product Preference," *Journal of Consumer Research*, 44 (5), 1085-103.

Ritzer, George (2016), "The Dehumanized Consumer: Does the Prosumer Offer Some

    Hope," in *Being Human in a Consumer Society*, Alejandro Néstor García

    Martínez, ed. New York: Routledge

---- (1983), "The "Mcdonaldization" of Society," *Journal of American culture*, 6 (1),

    100-07.

Rokeach, Milton (1973), The Nature of Human Values. New York: Free Press.

Rosenfeld, Jordan (2021), "The Price of a Cup of Coffee around the World," (accessed

    August 12, 2021), [available at https://finance.yahoo.com/news/price-cup-coffee-

    around-world-200000584.html].

Rosenthal, Robert and Ralph L. Rosnow (2008), Essentials of Behavioral Research:

    Methods and Data Analysis. New York: McGraw Hill Education.

Rosner, Elizabeth and Sophia Rosenbaum (2017), "This Is the Most Expensive Cup of

    Coffee in America," (accessed August 15, 2021), [available at

    https://nypost.com/2017/02/07/brooklyn-cafe-serves-the-costliest-cup-of-coffee-

    in-the-country/].

Rudman, Laurie A. and Kris Mescher (2012), "Of Animals and Objects: Men's Implicit

    Dehumanization of Women and Likelihood of Sexual Aggression," *Personality

    and Social Psychology Bulletin*, 38 (6), 734-46.

Rust, Roland T. and Ming-Hui Huang (2014), "The Service Revolution and the

    Transformation of Marketing Science," *Marketing Science*, 33 (2), 206-21.

Ruttan, Rachel L. and Brian J. Lucas (2018), "Cogs in the Machine: The Prioritization

    of Money and Self-Dehumanization," *Organizational Behavior and Human

    Decision Processes*, 149, 47-58.

Schroeder, Juliana and Nicholas Epley (2016), "Mistaking Minds and Machines: How Speech Affects Dehumanization and Anthropomorphism," *Journal of Experimental Psychology: General*, 145 (11), 1427.

Schwartz, Shalom H (2012), "An Overview of the Schwartz Theory of Basic Values," *Online readings in Psychology and Culture*, 2 (1), 11.

Schwartz, Shalom H. (1992), "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries," in *Advances in Experimental Social Psychology*, Vol. 25. Amsterdam: Elsevier.

---- (2006), "Value Orientations: Measurement, Antecedents and

Consequences across Nations," in *Measuring Attitudes Cross-Nationally: Lessons from the European Social Survey*, R. Jowell and C. Roberts and R. Fitzgerald and G. Eva, eds. London: SAGE Publications.

Schwartz, Shalom H. and Klaus Boehnke (2004), "Evaluating the Structure of Human Values with Confirmatory Factor Analysis," *Journal of Research in Personality*, 38 (3), 230-55.

Schwartz, Shalom H., Gian Vittorio Caprara, and Michele Vecchione (2010), "Basic Personal Values, Core Political Values, and Voting: A Longitudinal Analysis," *Political Psychology*, 31 (3), 421-52.

Secchi, Enrico, Aleda Roth, and Rohit Verma (2019), "The Impact of Service Improvisation Competence on Customer Satisfaction: Evidence from the Hospitality Industry," *Production and Operations Management*, 28 (6), 1329-46.

Septianto, Felix, Gavin Northey, and Rebecca Dolan (2019), "The Effects of Political Ideology and Message Framing on Counterfeiting: The Mediating Role of Emotions," *Journal of Business Research*, 99, 206-14.

Settembre, Jeanette (2019), "What a Cup of Coffee Really Costs," (accessed August 12, 2021), [available at https://nationalcoffee.blog/2019/04/26/what-a-cup-of-coffee-really-costs/].

Shanock, Linda R., Joseph A. Allen, Alexandra M. Dunn, Benjamin E. Baran, Cliff W. Scott, and Steven G. Rogelberg (2013), "Less Acting, More Doing: How Surface Acting Relates to Perceived Meeting Effectiveness and Other Employee Outcomes," *Journal of Occupational and Organizational Psychology*, 86 (4), 457-76.

Shostack, G Lynn (1987), "Service Positioning through Structural Change," *Journal of Marketing*, 51 (1), 34-43.

Skitka, Linda J, Elizabeth Mullen, Thomas Griffin, Susan Hutchinson, and Brian Chamberlin (2002), "Dispositions, Scripts, or Motivated Correction? Understanding Ideological Differences in Explanations for Social Problems," *Journal of personality and social psychology*, 83 (2), 470.

Smith, Adam (1937), "The Wealth of Nations." London: W. Strahan and T. Cadell.

Snyder, Jeremy (2010), "Exploitation and Sweatshop Labor: Perspectives and Issues," *Business Ethics Quarterly*, 20 (2), 187-213.

Socher, Richard, Alex Perelygin, Jean Wu, Jason Chuang, Christopher D. Manning, Andrew Y. Ng, and Christopher Potts (2013), "Recursive Deep Models for Semantic Compositionality over a Sentiment Treebank," in Proceedings of the 2013 conference on empirical methods in natural language processing.

Square (2015), "Average Price of Cafe Beverages in the United States in 2015, by Type (in U.S. Dollars) [Graph]," (accessed August 12, 2021), [available at https://www.statista.com/statistics/579376/cafe-beverage-price-by-type-us/].

Staub, Ervin (1989), The Roots of Evil: The Origins of Genocide and Other Group
Violence. Cambridge: Cambridge University Press.

Steenkamp, Jan-Benedict E.M., Harald J. Van Heerde, and Inge Geyskens (2010),
"What Makes Consumers Willing to Pay a Price Premium for National Brands
over Private Labels?," *Journal of Marketing Research*, 47 (6), 1011-24.

Stern, Chadly., Tessa V. West, and Peter G. Schmitt (2014), "The Liberal Illusion of
Uniqueness," *Psychological Science*, 25 (1), 137-44.

Stimson, James A. (2015), Tides of Consent: How Public Opinion Shapes American
Politics. New York: Cambridge University Press.

Surprenant, Carol F. and Michael R. Solomon (1987), "Predictability and
Personalization in the Service Encounter," *Journal of Marketing*, 51 (2), 86-96.

Swoboda, Bernhard, Karin Pennemann, and Markus Taube (2012), "The Effects of
Perceived Brand Globalness and Perceived Brand Localness in China: Empirical
Evidence on Western, Asian, and Domestic Retailers," *Journal of International
Marketing*, 20 (4), 72-95.

Sy, Thomas, Susanna Tram, and Linda A. O'Hara (2006), "Relation of Employee and
Manager Emotional Intelligence to Job Satisfaction and Performance," *Journal of
Vocational Behavior*, 68 (3), 461-73.

Szczygiel, Dorota Daniela and Róz·a Bazińska (2021), "Emotional Intelligence
Mitigates the Effects of Customer Incivility on Surface Acting and Exhaustion in
Service Occupations: A Moderated Mediation Model," *Frontiers in Psychology*,
11 (4084).

Tabachnick, Barbara G. and Linda S. Fidell (2007), Experimental Designs Using
Anova. Belmont, C.A.: Duxbury Press.

Tajfel, Henri (1981), Human Groups and Social Categories: Studies in Social Psychology. Cambridge: Cambridge University Press.

Tal, Aner, Yaniv Gvili, Moty Amar, and Brian Wansink (2017), "Can Political Cookies Leave a Bad Taste in One's Mouth? Political Ideology Influences Taste," *European Journal of Marketing*, 51 (11/12), 2175-91.

Tam, Kim-Pong, Angela Ka-Yee Leung, and Chi-Yue Chiu (2008), "On Being a Mindful Authoritarian: Is Need for Cognition Always Associated with Less Punitiveness?," *Political Psychology*, 29 (1), 77-91.

Teas, R. Kenneth, John G. Wacker, and R. Eugene Hughes (1979), "A Path Analysis of Causes and Consequences of Salespeople's Perceptions of Role Clarity," *Journal of Marketing Research*, 16 (3), 355-69.

Terskova, Maria A. and Elena R. Agadullina (2019), "Dehumanization of Dirty Workers and Attitudes toward Social Support," *Journal of Applied Social Psychology*, 49 (12), 767-77.

Tetlock, Philip E. (1983), "Cognitive Style and Political Ideology," *Journal of Personality and Social Psychology*, 45 (1), 118-26.

---- (1986), "A Value Pluralism Model of Ideological Reasoning," *Journal of Personality and Social Psychology*, 50 (4), 819-27.

Thompson, William E (1983), "Hanging Tongues: A Sociological Encounter with the Assembly Line," *Qualitative Sociology*, 6 (3), 215-37.

Timmermans, Stefan and Steven Epstein (2010), "A World of Standards but Not a Standard World: Toward a Sociology of Standards and Standardization," *Annual Review of Sociology*, 36 (1), 69-89.

Tripathi, Yash (2020), "What Happened to Yahoo Comments Section? Why Did Yahoo Remove Comments?," (accessed September 29, 2020), [available at

https://www.republicworld.com/technology-news/apps/what-happened-to-yahoo-comments-section-why-did-yahoo-remove-comments.html].

Uy, Marilyn A., Katrina Jia Lin, and Remus Ilies (2017), "Is It Better to Give or Receive? The Role of Help in Buffering the Depleting Effects of Surface Acting," *Academy of Management Journal*, 60 (4), 1442-61.

Vaes, Jeroen and Martina Muratore (2013), "Defensive Dehumanization in the Medical Practice: A Cross-Sectional Study from a Health Care Worker's Perspective," *British Journal of Social Psychology*, 52 (1), 180-90.

Vaes, Jeroen, Maria-Paola Paladino, and Jacques-Philippe Leyens (2002), "The Lost E-Mail: Prosocial Reactions Induced by Uniquely Human Emotions," *British journal of social psychology*, 41 (4), 521-34.

Vaes, Jeroen, Maria Paola Paladino, Luigi Castelli, Jacques-Philippe Leyens, and Anna Giovanazzi (2003), "On the Behavioral Consequences of Infrahumanization: The Implicit Role of Uniquely Human Emotions in Intergroup Relations," *Journal of personality and social psychology*, 85 (6), 1016.

Vaes, Jeroen, Paola Paladino, and Elisa Puvia (2011), "Are Sexualized Women Complete Human Beings? Why Men and Women Dehumanize Sexually Objectified Women," *European Journal of Social Psychology*, 41 (6), 774-85.

Van Lange, Paul A. M., René Bekkers, Antonio Chirumbolo, and Luigi Leone (2012), "Are Conservatives Less Likely to Be Prosocial Than Liberals? From Games to Ideology, Political Preferences and Voting," *European Journal of Personality*, 26 (5), 461-73.

Väyrynen, Tuure and Sari Laari-Salmela (2018), "Men, Mammals, or Machines? Dehumanization Embedded in Organizational Practices," *Journal of Business Ethics*, 147 (1), 95-113.

Vecchione, Michele, Gianvittorio Caprara, Francesco Dentale, and Shalom H. Schwartz (2013), "Voting and Values: Reciprocal Effects over Time," *Political Psychology*, 34 (4), 465-85.

Vera, Dusya and Mary Crossan (2005), "Improvisation and Innovative Performance in Teams," *Organization Science*, 16 (3), 203-24.

---- (2004), "Theatrical Improvisation: Lessons for Organizations," *Organization Studies*, 25 (5), 727-49.

Vermeer, Susan A. M., Theo Araujo, Stefan F. Bernritter, and Guda van Noort (2019), "Seeing the Wood for the Trees: How Machine Learning Can Help Firms in Identifying Relevant Electronic Word-of-Mouth in Social Media," *International Journal of Research in Marketing*, 36 (3), 492-508.

Victorino, Liana, Rohit Verma, Bryan L. Bonner, and Don G. Wardell (2012), "Can Customers Detect Script Usage in Service Encounters? An Experimental Video Analysis," *Journal of Service Research*, 15 (4), 390-400.

Viki, G. Tendayi, Daniel Osgood, and Sabine Phillips (2013), "Dehumanization and Self-Reported Proclivity to Torture Prisoners of War," *Journal of Experimental Social Psychology*, 49 (3), 325-28.

Volkova, Svitlana, Glen Coppersmith, and Benjamin Van Durme (2014), "Inferring User Political Preferences from Streaming Communications," in Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers).

Wagner, David T., Christopher M. Barnes, and Brent A. Scott (2014), "Driving It Home: How Workplace Emotional Labor Harms Employee Home Life," *Personnel Psychology*, 67 (2), 487-516.

Wang, Guangping and Richard G. Netemeyer (2002), "The Effects of Job Autonomy, Customer Demandingness, and Trait Competitiveness on Salesperson Learning, Self-Efficacy, and Performance," *Journal of the Academy of Marketing Science*, 30 (3), 217-28.

Wang, Xin, Yuanchao Liu, Cheng-Jie Sun, Baoxun Wang, and Xiaolong Wang (2015), "Predicting Polarities of Tweets by Composing Word Embeddings with Long Short-Term Memory," in Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 1: Long Papers).

Waytz, Adam and Nicholas Epley (2012), "Social Connection Enables Dehumanization," *Journal of experimental social psychology*, 48 (1), 70-76.

Waytz, Adam, Nicholas Epley, and John T. Cacioppo (2010a), "Social Cognition Unbound:Insights into Anthropomorphism and Dehumanization," *Current Directions in Psychological Science*, 19 (1), 58-62.

Waytz, Adam, Kurt Gray, Nicholas Epley, and Daniel M. Wegner (2010b), "Causes and Consequences of Mind Perception," *Trends in cognitive sciences*, 14 (8), 383-88.

Weber, Max (1930), The Protestant Ethic and the Spirit of Capitalism. London: Unwin University Books.

Wedel, Michel and P.K. Kannan (2016), "Marketing Analytics for Data-Rich Environments," *Journal of Marketing*, 80 (6), 97-121.

Wessel, Jennifer L and Dirk D Steiner (2015), "Surface Acting in Service: A Two-Context Examination of Customer Power and Politeness," *Human Relations*, 68 (5), 709-30.

Whitaker, Brian G., Jason J. Dahling, and Paul Levy (2007), "The Development of a Feedback Environment and Role Clarity Model of Job Performance," *Journal of Management*, 33 (4), 570-91.

Wickham, Robert E., Rachel E. Williamson, Charlotte L. Beard, Charlene L. B. Kobayashi, and Tom W. Hirst (2016), "Authenticity Attenuates the Negative Effects of Interpersonal Conflict on Daily Well-Being," *Journal of Research in Personality*, 60, 56-62.

Williams, Robin M. (1968), "The Concept of Values," in *International Encyclopedia of the Social Sciences*, David L. Sills, ed. Vol. 16. New York: Maclillan.

Winterich, Karen Page, Yinlong Zhang, and Vikas Mittal (2012), "How Political Identity and Charity Positioning Increase Donations: Insights from Moral Foundations Theory," *International Journal of Research in Marketing*, 29 (4), 346-54.

Wong, F. M. F., C. W. Tan, S. Sen, and M. Chiang (2016), "Quantifying Political Leaning from Tweets, Retweets, and Retweeters," *IEEE Transactions on Knowledge and Data Engineering*, 28 (8), 2158-72.

Wong, Vincent Chi, Lei Su, and Howard Pong-Yuen Lam (2020), "When Less Is More: How Mindset Influences Consumers' Responses to Products with Reduced Negative Attributes," *Journal of Marketing*, 84 (5), 137-53.

Woo, Ka-shing and Bobbie Chan (2020), ""Service with a Smile" and Emotional Contagion: A Replication and Extension Study," *Annals of Tourism Research*, 80, 102850.

Woodcock, Jamie (2017), "As a Call Centre Worker I Saw How Employees Are Stripped of Their Rights," (accessed March 15, 2020), [available at

https://www.theguardian.com/careers/2017/feb/16/as-a-call-centre-worker-i-saw-how-employees-are-stripped-of-their-rights].

Wortman, Paul M. (1983), "Evaluation Research: A Methodological Perspective," *Annual Review of Psychology*, 34, 223-60.

Xanthopoulou, Despoina, Arnold B. Bakker, Wido G.M. Oerlemans, and Maria Koszucka (2018), "Need for Recovery after Emotional Labor: Differential Effects of Daily Deep and Surface Acting," *Journal of Organizational Behavior*, 39 (4), 481-94.

Yadav, S. and S. Shukla (2016), "Analysis of K-Fold Cross-Validation over Hold-out Validation on Colossal Datasets for Quality Classification," in 2016 IEEE 6th International Conference on Advanced Computing (IACC).

Yagil, Dana and Hana Medler-Liraz (2017), "Personally Committed to Emotional Labor: Surface Acting, Emotional Exhaustion and Performance among Service Employees with a Strong Need to Belong," *Journal of Occupational Health Psychology*, 22 (4), 481-91.

Yee, Rachel W. Y., Andy C. L. Yeung, and T. C. Edwin Cheng (2008), "The Impact of Employee Satisfaction on Quality and Profitability in High-Contact Service Industries," *Journal of Operations Management*, 26 (5), 651-68.

Young, T., D. Hazarika, S. Poria, and E. Cambria (2018), "Recent Trends in Deep Learning Based Natural Language Processing [Review Article]," *IEEE Computational Intelligence Magazine*, 13 (3), 55-75.

Yusuf, Hanna (2019), "Costa Coffee Franchise Workers 'Not Treated Like Humans'," (accessed March 20, 2020), [available at https://www.bbc.co.uk/news/uk-49432367].

Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research*, 12 (3), 341-52.

Zebel, Sven, Anja Zimmermann, G. Tendayi Viki, and Bertjan Doosje (2008), "Dehumanization and Guilt as Distinct but Related Predictors of Support for Reparation Policies," *Political Psychology*, 29 (2), 193-219.

Zeithaml, Valarie A. (1988), "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing*, 52 (3), 2-22.

Zeithaml, Valarie A., Leonard L. Berry, and Ananthanarayanan Parasuraman (1996), "The Behavioral Consequences of Service Quality," *Journal of Marketing*, 60 (2), 31-46.

Zhang, Hong, Darius K-S Chan, Fei Teng, and Denghao Zhang (2015), "Sense of Interpersonal Security and Preference for Harsh Actions against Others: The Role of Dehumanization," *Journal of Experimental Social Psychology*, 56, 165-71.

APPENDICES

Appendix A. Python Code of the LSTM Model Classifying Yahoo Comments

```
In [ ]:  # -*- coding: utf-8 -*-

         import argparse
         import numpy as np
         import pandas as pd
         import os
         import gc
         import pandas as pd
         import numpy as np
         import tqdm
         import nltk
         import re
         import csv

         from sklearn.preprocessing import LabelEncoder, OneHotEncoder

         from keras.optimizers import RMSprop,Adam,SGD
         from keras.preprocessing.text import Tokenizer
         from keras.preprocessing.sequence import pad_sequences
         from keras.layers import Dense, Input, LSTM, Embedding
         from keras.layers import Dropout, Activation,Bidirectional,SpatialDropout1D
         from keras.layers import Conv1D,GlobalMaxPooling1D,GlobalAveragePooling1D
         from keras.layers import concatenate,add,multiply
         from keras.models import Model
         from keras.regularizers import l1,l2
         from sklearn.model_selection import train_test_split

         from keras.layers.normalization import BatchNormalization
         from keras.callbacks import EarlyStopping, ModelCheckpoint

         from keras import backend as K
         from keras.engine.topology import Layer
         from keras import initializers, regularizers, constraints


         from sklearn.metrics import roc_auc_score
         from keras.callbacks import Callback


                                    1
```

```
        from keras.callbacks import ReduceLROnPlateau

        pd.set_option('display.max_columns', 999)
        pd.set_option('display.max_rows', 999)
        pd.set_option('display.max_colwidth', 999)

In [ ]: import os
        os.environ['CUDA_VISIBLE_DEVICES']='0'

In [ ]: df = pd.read_csv('./sep19/Yahoo trained file10 gui vuong.csv',engine='python')

        df['comment']=df['comment_content']

        df = df.drop_duplicates('comment_id')

        train_data = df[df.political_ideology.isin(['irrelevant','conservative','liberal'])]
        test_data = df[~df.political_ideology.isin(['irrelevant','conservative','liberal'])]

        train_data['label'] = train_data['political_ideology'].str.lower()

In [ ]: df.head(1)

In [ ]: df.shape

In [ ]: df.head()
```

1 Reading data

```
In [ ]: df.head(1)

In [ ]: df['comment'] = df['comment'].str.lower().str.strip()

        train_data = df[df.political_ideology.isin(['irrelevant','conservative','liberal'])]
        test_data = df[~df.political_ideology.isin(['irrelevant','conservative','liberal'])]

In [ ]: train_data['label'] = train_data['political_ideology'].str.lower()
```

2 Clean data

```
In [ ]: def clean_str(text):
            text  = text.lower()
            text = re.sub(r"^\"", "", text)
            text = re.sub(r"^\d*", "", text)
            text = re.sub(r"\"$", "", text)
            text = re.sub(r"\d*$", "", text)

            text = re.sub(r"what's", "what is ", text)
            text = re.sub(r"\'s", " ", text)
```

2

217

```
            text = re.sub(r"\'ve", " have ", text)
            text = re.sub(r"can't", "cannot ", text)
            text = re.sub(r"n't", " not ", text)
            text = re.sub(r"i'm", "i am ", text)
            text = re.sub(r"I'm", "I am ", text)
            text = re.sub(r"\'re", " are ", text)
            text = re.sub(r"\'d", " would ", text)
            text = re.sub(r"\'ll", " will ", text)
            text = re.sub(r",", " ", text)
            text = re.sub(r"\.", " . ", text)
            text = re.sub(r"!", " ! ", text)
            text = re.sub(r"\n+", "\n ", text)
            text = re.sub(r"\"\"", " \" ", text)
            text = re.sub(r"\?", " ? ", text)
            text = re.sub(r"\(", " ( ", text)
            text = re.sub(r"%", " % ", text)

            text = re.sub(r"\)", " ) ", text)
            text = re.sub(r"\/", " ", text)
            text = re.sub(r"\^", " ^ ", text)
            text = re.sub(r"\+", " + ", text)
            text = re.sub(r"\-", " - ", text)
            text = re.sub(r"\=", " = ", text)
            text = re.sub(r"'", " ", text)
            text = re.sub(r"(\d+)(k)", r"\g<1>000", text)
            text = re.sub(r":", " : ", text)
            text = re.sub(r" e g ", " eg ", text)
            text = re.sub(r" e.g ", " eg ", text)
            text = re.sub(r" E.G ", " eg ", text)
            text = re.sub(r" e . g ", " eg ", text)
            text = re.sub(r" E . G ", " eg ", text)
            text = re.sub(r" b g ", " bg ", text)
            text = re.sub(r" u s ", " america ", text)
            text = re.sub(r" U.S ", " america ", text)
            text = re.sub(r" U . S ", " america ", text)
            text = re.sub(r"\0s", "0", text)
            text = re.sub(r" 9 11 ", "911", text)
            text = re.sub(r"e - mail", "email", text)
            text = re.sub(r"j k", "jk", text)
            text = re.sub(r"\s{2,}", " ", text)

            return text

In [ ]: train_data['comment'] = train_data["comment"].apply(clean_str)

In [ ]: list_sentences_train = train_data['comment'].values

In [ ]: list_sentences_train[0]
```

3

3 prepare embedding

```
In [ ]: # from gensim.models.wrappers import FastText
        from gensim.models.fasttext import load_facebook_model

        vectorizer = load_facebook_model('./crawl-300d-2M-subword.bin')

        type(vectorizer)

        vectorizer.wv['trumpanzee']
```

4 TOkenization

```
In [ ]: from keras.preprocessing.text import Tokenizer
        from keras.preprocessing.sequence import pad_sequences

        tokenizer = Tokenizer()

        tokenizer.fit_on_texts(train_data['comment'].values)
        x_train = tokenizer.texts_to_sequences(train_data['comment'].values)

        # maxlen = max([len(x) for x in x_train])
        maxlen = 100
        x_train = pad_sequences(x_train,maxlen=maxlen)
        x_train = x_train.tolist()

In [ ]: train_data['xtrain'] = x_train

In [ ]: id2word = {v:k for k,v in tokenizer.word_index.items()}

In [ ]: len(tokenizer.word_index) == len(id2word)

In [ ]: embedding_matrix = []

        for i, w in tqdm.tqdm(id2word.items()):
            embedding_matrix.append(vectorizer.wv[w])

        embedding_matrix = np.array(embedding_matrix)

        m = embedding_matrix.mean(axis=0)
        std = embedding_matrix.std(axis=0)

        embedding_matrix = (embedding_matrix - m) / std

        embedding_matrix = np.vstack(
            [np.expand_dims(embedding_matrix.mean(axis=0), 0), embedding_matrix])

In [ ]: len(id2word)
```

4

5 train models

```
In [ ]: from sklearn.metrics import classification_report,confusion_matrix

        def examine(m,x,y):
            labels = np.array(['conservative', 'irrelevant', 'liberal'])

            p = np.argmax(m.predict(x,batch_size=1024),axis=1)
            p_label = labels[p]
            ytrain_label = labels[np.argmax(y,axis=1)]

            print (classification_report(
                ytrain_label,
                p_label))

In [ ]: class IntervalEvaluation(Callback):
            def __init__(self, validation_data=(), interval=10):
                super(Callback, self).__init__()

                self.interval = interval
                self.X_val, self.y_val = validation_data

            def on_epoch_end(self, epoch, logs={}):

                y_pred = self.model.predict(self.X_val, batch_size=512,verbose=0)
                score = roc_auc_score(self.y_val, y_pred)
                print ("\nepoch: {:d} - score: {:.6f}\n".format(epoch, score))




        class EarlyStoppingByAUCROC(Callback):
            def __init__(self,validation_data=(),patience=3,delta=0.0):
                super(Callback, self).__init__()
                self.best_auc = 0.0
                self.epoch_count = 0
                self.patience = patience
                self.step = patience
                self.delta=delta
                self.X_val, self.y_val = validation_data
                self.best_model = None

            def on_epoch_end(self, epoch,logs={}):

                y_pred = self.model.predict(self.X_val, verbose=0)
                curr_auc = roc_auc_score(self.y_val, y_pred)

                if curr_auc <= self.best_auc:
                    if self.step > 0:
```

5

```
                        self.step -= 1
                    else:
                        self.best_model.save_weights('fold_best_model.h5')
                        self.model.stop_training = True
                else:
                    self.best_auc = curr_auc
                    self.step = self.patience
                    self.best_model = self.model


In [ ]: trainset, testset = train_test_split(
            train_data,
            test_size=0.2,
            stratify=train_data['label'].values,
            random_state=420)

        trainset, validset = train_test_split(
            trainset,
            test_size=0.2,
            stratify=trainset['label'].values,
            random_state=420)

In [ ]: ytrain = pd.get_dummies(trainset['label']).values
        ytest = pd.get_dummies(testset['label']).values
        yvalid = pd.get_dummies(validset['label']).values


        xtrain=np.array([np.array(xi) for xi in trainset['xtrain']])
        xtest=np.array([np.array(xi) for xi in testset['xtrain']])
        xvalid=np.array([np.array(xi) for xi in validset['xtrain']])

        xtrain.shape,xtest.shape,xvalid.shape

In [ ]: input_layer = Input(shape=(maxlen, ))


        embedding_layer = Embedding(
            embedding_matrix.shape[0],
            embedding_matrix.shape[1],
            weights=[embedding_matrix],
            embeddings_regularizer = l2(0.05 * 1 / (17409 * 300)),
            trainable=False)(input_layer)

        x = Bidirectional(LSTM(300,return_sequences=True))(embedding_layer)
        x = Bidirectional(LSTM(300,return_sequences=True))(x)
        x = Bidirectional(LSTM(300,return_sequences=False))(x)
```

6

```python
        x = Dense(3, activation="softmax")(x)

        model = Model(inputs=input_layer, outputs=x)


        model.compile(
            loss="categorical_crossentropy",
            optimizer=Adam(),
            metrics=["accuracy"])
```

In [ ]: model.summary()

In [ ]: lr_callback = ReduceLROnPlateau(monitor='val_loss', factor=0.5, patience=2,
                                        verbose=0, mode='auto', epsilon=0.0001,
                                        cooldown=1, min_lr=1e-9)

        early_stopping = EarlyStopping(patience=3,restore_best_weights=True)

        callbacks = [early_stopping,
                     lr_callback,
        #   auc_callback
                     ]

        hist = model.fit(xtrain,ytrain, validation_data=(xvalid, yvalid),
                epochs=50,batch_size=128,
                callbacks=callbacks)

In [ ]: examine(model, xtrain,ytrain)

In [ ]: examine(model, xvalid,yvalid)

In [ ]: examine(model, xtest,ytest)

In [ ]: model.layers[1].trainable=True

        hist = model.fit(xtrain,ytrain, validation_data=(xvalid, yvalid),
                epochs=50,batch_size=128,
                callbacks=callbacks)

7

222

6 Pred all files

```
In [ ]: def hard_label(row):
            if (row['probability_conservative'] > row['probability_irrelevant']) \
            and (row['probability_conservative'] - row['probability_liberal'] > 0.3):
                return 'conservative'
            if (row['probability_liberal'] > row['probability_irrelevant']) \
            and (row['probability_liberal'] - row['probability_conservative'] > 0.3):
                return 'liberal'
            return 'irrelevant'


        def _pred(fpath):
            try:
                start = datetime.datetime.now()

                fname = fpath.split('/')[-1]

                pred_df = pd.read_csv(fpath,header=None,engine='python')
                pred_df.columns = ["title","article_id","article_url",
                                   "comment_id","link_comment","comment",
                                   "upvote","downvote","userid","timecreated"]



                pred_df['comment'].fillna('<NA>',inplace=True)
                clean_comment =  pred_df['comment'].apply(clean_str).values


                xpred = tokenizer.texts_to_sequences(clean_comment)

                xpred = pad_sequences(xpred,maxlen=maxlen)


                pred = model.predict(xpred,batch_size=4096)

                pred_max_prob = np.argmax(pred,axis=1)
                pred_max_prob = labels[pred_max_prob]

                pred_df['prediction_max_probability'] = pred_max_prob

                pc = pred[:,0].copy()
                pc_mean = pc.mean()

                pred_df['probability_conservative'] = pc

                pc[pc>pc_mean] = 1
                pc[pc<=pc_mean] = 0
```

8

223

```python
                pred_df['label_conservative'] = pc

                px = pred[:,1].copy()
                px_mean = px.mean()

                pred_df['probability_irrelevant'] = px

                px[px>px_mean] = 1
                px[px<=px_mean] = 0
                pred_df['label_irrelevant'] = px

                pz = pred[:,2].copy()
                pz_mean = pz.mean()
                pred_df['probability_liberal'] = pz

                pz[pz>pz_mean] = 1
                pz[pz<=pz_mean] = 0
                pred_df['label_liberal'] = pz

                pred_df['hard_prediction'] =  pred_df.apply(hard_label,axis=1)



                output_name = OUTPUT_PATH+'/'+fname
                pred_df.to_csv(output_name,index=False)
                end = datetime.datetime.now()
                print (output_name)
                SUCCESS.append((fname,pred_df.shape,(end-start).seconds))

                success_log = open('../politica/success.txt','w')
                for i in SUCCESS:
                    success_log.writelines(str(i))
                    success_log.writelines('\n')
                success_log.close()

            except Exception as e:
                FAILURE.append((fname,str(e)))
                print(e)
In [ ]: import os
        import glob
        import datetime
        from datetime import timedelta
        INPUT_PATH = '/home/vuongnguyenm/Desktop/dehuman/politica/big_prediction'
        OUTPUT_PATH = '/home/vuongnguyenm/Desktop/dehuman/politica/big_prediction_output_sep27'
        os.chdir(INPUT_PATH)
        fpaths = glob.glob(INPUT_PATH+'/*.csv')

In [ ]: user_counts = 0
```

9

224

```python
        def _loop(fpath):
            start = datetime.datetime.now()

            fname = fpath.split('/')[-1]

            pred_df = pd.read_csv(fpath,header=None,engine='python')
            pred_df.columns = ["title","article_id","article_url","comment_id",
                               "link_comment","comment","upvote","downvote",
                               "userid","timecreated"]
            uids = pred_df.userid.unique()
            return uids.tolist()
```

```python
In [ ]: SUCCESS = glob.glob(OUTPUT_PATH+'/*.csv')
        FAILURE = []
        uids = []

        for fpath in tqdm.tqdm(fpaths[:]) :
            try:
                uids.extend(_loop(fpath))
            except Exception as e:
                FAILURE.append((fpath,str(e)))
                print(e)
```

```python
In [ ]: SUCCESS = glob.glob(OUTPUT_PATH+'/*.csv')
        FAILURE = []

        for fpath in fpaths :

            _pred(fpath)

        failure_log = open('/home/vuongnguyenm/Desktop/dehuman/politica/failure.txt','w')
        for i in FAILURE:
            failure_log.writelines(i)
        failure_log.close()
```

7 Political orientation

```python
In [ ]: f2 = glob.glob(OUTPUT_PATH + '/*.csv')
        f1 = glob.glob(INPUT_PATH + '/*.csv')

        failed_files = list(
            set([i.split('/')[-1] for i in f1]) - set([i.split('/')[-1] for i in f2]))
```

```python
In [ ]: user_stats = []
        SUCCESS = []
        FAILURE = []
```

```
        for f in tqdm.tqdm(f2):
            try:

                pred_df = pd.read_csv(f, engine='python', parse_dates=['timecreated'])
                pred_df = pred_df[(pred_df.timecreated >= '2017-01-21')
                                  & (pred_df.timecreated < '2020-07-04')]
                user_stats_max_prob = pred_df.groupby([
                    'userid', 'prediction_max_probability'
                ])['comment_id'].count().reset_index()
                user_stats_hard_pred = pred_df.groupby(
                    ['userid', 'hard_prediction'])['comment_id'].count().reset_index()

                user_stats.append((user_stats_max_prob, user_stats_hard_pred))
                SUCCESS.append(f)
            except Exception as e:
                FAILURE.append((f, str(e)))

In [ ]: FAILURE

In [ ]: max_prob = pd.concat([_[0] for _ in user_stats])

        max_prob = max_prob.groupby(
            ['userid',
             'prediction_max_probability'])['comment_id'].sum().reset_index()

        max_prob = max_prob.pivot(
            index='userid', columns='prediction_max_probability', values='comment_id')

        max_prob.fillna(0, inplace=True)
        max_prob['conservative'] = max_prob['conservative'].astype(int)
        max_prob['irrelevant'] = max_prob['irrelevant'].astype(int)
        max_prob['liberal'] = max_prob['liberal'].astype(int)

        hard_prob = pd.concat([_[1] for _ in user_stats])

        hard_prob = hard_prob.groupby(
            ['userid', 'hard_prediction'])['comment_id'].sum().reset_index()

        hard_prob = hard_prob.pivot(
            index='userid', columns='hard_prediction', values='comment_id')
        hard_prob.fillna(0, inplace=True)

        hard_prob['conservative'] = hard_prob['conservative'].astype(int)
        hard_prob['irrelevant'] = hard_prob['irrelevant'].astype(int)
        hard_prob['liberal'] = hard_prob['liberal'].astype(int)

In [ ]: max_prob.to_csv(
            './po_max_proba_sept29_201702_2020704.csv'

                                       11
```

226

```
        )
        hard_prob.to_csv(
            './po_hard_proba_sept29_201702_2020704.csv'
        )

In [ ]: f2 = glob.glob(
            '/home/vuongnguyenm/Desktop/dehuman/politica/output/*.csv'
        )
        f1 = glob.glob(
            '/home/vuongnguyenm/Desktop/dehuman/politica/output/*.csv'
        )

        failed_files = list(
            set([i.split('/')[-1] for i in f1]) - set([i.split('/')[-1] for i in f2]))
```

12

Appendix B. Python Code of the LSTM Model Classifying Mail

Comments

1 Initialize

```python
In [ ]: # -*- coding: utf-8 -*-

        import argparse
        import csv
        import gc
        import nltk
        import numpy as np
        import os
        import pandas as pd
        import re
        import sklearn
        import tqdm


        from functools import partial
        from keras import backend as K
        from keras import initializers, regularizers, constraints
        from keras.callbacks import Callback, ReduceLROnPlateau, EarlyStopping, ModelCheckpoint

        from keras.layers import Dense, Input, LSTM, Embedding
        from keras.layers import Dropout, Activation,Bidirectional,SpatialDropout1D
        from keras.layers.normalization import BatchNormalization

        from keras.models import Model
        from keras.optimizers import RMSprop,Adam,SGD
        from keras.preprocessing.sequence import pad_sequences
        from keras.preprocessing.text import Tokenizer

        from keras.regularizers import l2,l1

        from sklearn import metrics
        from sklearn.metrics import roc_auc_score
        from sklearn.model_selection import train_test_split
        from sklearn.preprocessing import LabelEncoder, OneHotEncoder


                                1
```

```
        pd.set_option('display.max_columns', 999)
        pd.set_option('display.max_colwidth', 999)
        pd.set_option('display.max_rows', 999)

In [ ]: import gensim
        gensim.__version__

In [ ]: import keras
        keras.__version__

In [ ]: import tensorflow as tf
        tf.config.list_physical_devices('CPU')

In [ ]: tf.config.list_physical_devices('GPU')

In [ ]: !ls MAIL_RYAN_AIR/TRAIN_TEST/

In [ ]: RYANAIR = './RYANAIR/'

In [ ]: f = './MAIL_RYAN_AIR/TRAIN_TEST/input.csv'
        df = pd.read_csv(f,engine='python')

In [ ]: df.columns

In [ ]: df.columns = ['comment_id','comment','label','topic','file']

In [ ]: df.columns

In [ ]: df = df.drop_duplicates('comment_id')

        df = df[df.comment.str.len() >= 4]
        df['comment'] = df.comment.str.replace('borish','boris')
        df['comment'] = df.comment.str.replace('bojo','boris johnson')
        df['comment'] = df.comment.str.replace('bj','boris johnson')
        df['comment'] = df.comment.str.replace('johnson','boris johnson')

        train_data = df[df.label.isin(['irrelevant','conservative','liberal'])]
        test_data = df[~df.label.isin(['irrelevant','conservative','liberal'])]

        train_data['label'] = train_data['label'].str.lower()

In [ ]: df.head(1)

In [ ]: df.shape

In [ ]: df.head()

In [ ]: df.loc[5341]
```

2

2   Reading data

```
In [ ]: df.head(1)

In [ ]: train_data = df[df.label.isin(['irrelevant','conservative','liberal'])]

In [ ]: train_data['label'] = train_data['label'].str.lower()

In [ ]: train_data.shape

In [ ]: train_data.head(1)
```

3   Clean data

```
In [ ]: def clean_str(text):
            text = re.sub(r"^\"", "", text)
            text = re.sub(r"^\d*", "", text)
            text = re.sub(r"\"$", "", text)
            text = re.sub(r"\d*$", "", text)

            text = re.sub(r"what's", "what is ", text)
            text = re.sub(r"\'s", " ", text)
            text = re.sub(r"\'ve", " have ", text)
            text = re.sub(r"can't", "cannot ", text)
            text = re.sub(r"n't", " not ", text)
            text = re.sub(r"i'm", "i am ", text)
            text = re.sub(r"I'm", "I am ", text)
            text = re.sub(r"\'re", " are ", text)
            text = re.sub(r"\'d", " would ", text)
            text = re.sub(r"\'ll", " will ", text)
            text = re.sub(r",", " ", text)
            text = re.sub(r"\.", " . ", text)
            text = re.sub(r"!", " ! ", text)
            text = re.sub(r":", " : ", text)
            text = re.sub(r"\n+", "\n ", text)
            text = re.sub(r"\"\"", " \" ", text)
            text = re.sub(r"\?", " ? ", text)
            text = re.sub(r"\(", " ( ", text)
            text = re.sub(r"\)", " ) ", text)
            text = re.sub(r"\/", " ", text)
            text = re.sub(r"\^", " ^ ", text)
            text = re.sub(r"\'", " \' ", text)
            text = re.sub(r"\"", " \" ", text)
            text = re.sub(r"\+", " + ", text)
            text = re.sub(r"\-", " - ", text)
            text = re.sub(r"\=", " = ", text)
            text = re.sub(r"'", " ", text)
            text = re.sub(r"'", " ' ", text)
```

3

```
        text = re.sub(r"(\d+)(k)", r"\g<1>000", text)
        text = re.sub(r":", " : ", text)
        text = re.sub(r" e g ", " eg ", text)
        text = re.sub(r" e.g ", " eg ", text)
        text = re.sub(r" E.G ", " eg ", text)
        text = re.sub(r" e . g ", " eg ", text)
        text = re.sub(r" E . G ", " eg ", text)
        text = re.sub(r" b g ", " bg ", text)
        text = re.sub(r" u s ", " america ", text)
        text = re.sub(r" U.S ", " america ", text)
        text = re.sub(r" U . S ", " america ", text)
        text = re.sub(r"\0s", "0", text)
        text = re.sub(r" 9 11 ", "911", text)
        text = re.sub(r"e - mail", "email", text)
        text = re.sub(r"j k", "jk", text)
        text = re.sub(r"@", " @ ", text)
        text = re.sub(r"#", " # ", text)
        text = re.sub(r"\s{2,}", " ", text)
        text = text.lower()

        return text
```

```
In [ ]: train_data['comment'] = train_data["comment"].apply(clean_str)
```

```
In [ ]: train_data.head(10)
```

```
In [ ]: train_data = train_data.sample(frac=1)
```

```
In [ ]: list_sentences_train = train_data['comment'].values
        list_sentences_test = test_data['comment'].values
```

```
In [ ]: list_sentences_train[1]
```

4   Embedding

```
In [ ]: # from gensim.models.wrappers import FastText
        from gensim.models.fasttext import load_facebook_model

        #https://fasttext.cc/docs/en/crawl-vectors.html
        vectorizer = load_facebook_model('./crawl-300d-2M-subword.bin')

        type(vectorizer)

        # vectorizer.wv['trumpanzee']
```

5   TOkenization

```
In [ ]: from keras.preprocessing.text import Tokenizer
        from keras.preprocessing.sequence import pad_sequences
```

4

231

```
        tokenizer = Tokenizer()

        tokenizer.fit_on_texts(train_data['comment'].values)
        x_train = tokenizer.texts_to_sequences(train_data['comment'].values)

        # maxlen = max([len(x) for x in x_train])
        maxlen = 50
        x_train = pad_sequences(x_train,maxlen=maxlen)
        x_train = x_train.tolist()

In [ ]: train_data['xtrain'] = x_train

In [ ]: id2word = {v:k for k,v in tokenizer.word_index.items()}

In [ ]: len(tokenizer.word_index) == len(id2word)

In [ ]: embedding_matrix = []

        for i,w in tqdm.tqdm(id2word.items()):
            embedding_matrix.append(vectorizer.wv[w])

        embedding_matrix = np.array(embedding_matrix)
        embedding_matrix = np.vstack([np.expand_dims(embedding_matrix.mean(axis=0),0) ,
                                      embedding_matrix])


        m = embedding_matrix.mean(axis=0)
        std = embedding_matrix.std(axis=0)

        embedding_matrix = (embedding_matrix - m) / std

In [ ]: embedding_matrix.shape
```

6 train models

```
In [ ]: from sklearn.metrics import classification_report, confusion_matrix


        def examine(m, x, y):
            labels = np.array(['conservative', 'irrelevant', 'liberal'])

            p = np.argmax(m.predict(x, batch_size=1024), axis=1)
            p_label = labels[p]
            ytrain_label = labels[np.argmax(y, axis=1)]

            print(classification_report(ytrain_label, p_label))
```

5

```python
class LabelEvaluation(Callback):
    def __init__(self,
                 validation_data=[(), ()],
                 name=["validset1"],
                 scoring_fn=metrics.accuracy_score,
                 interval=1,
                 label_index=0):
        super(Callback, self).__init__()

        self.interval = interval
        self.validation_data = validation_data
        self.label_index = label_index
        self.scoring_fn = scoring_fn
        self.name = name

    def on_epoch_end(self, epoch, logs={}):
        scoring_fn = self.scoring_fn

        for i, data in enumerate(self.validation_data):
            x, y = data
            label_index = self.label_index[i]
            name = self.name[i]

            ypred = self.model.predict(x, batch_size=512, verbose=0)
            ypred = (np.argmax(ypred, axis=1) == label_index)

            ytrue = y[:, label_index]
            score = scoring_fn(ytrue, ypred)
            print("\nScores Set {:s} size {:d} epoch: {:d} - score: {:.3f}".
                  format(name, ytrue.shape[0], epoch, score))
```

```python
In [ ]: trainset, testset = train_test_split(
            train_data,
            test_size=0.2,
            stratify=train_data['label'].values,
            random_state=710)

        trainset, validset = train_test_split(
            trainset,
            test_size=0.1,
            stratify=trainset['label'].values,
            random_state=710)

        trainset['set'] = 'train'
        validset['set'] = 'valid'
        testset['set'] = 'test'
        traindata2 = pd.concat([trainset,validset,testset])
```

6

233

```python
        ytrain = pd.get_dummies(trainset['label']).values
        yvalid = pd.get_dummies(validset['label']).values

        ytest = pd.get_dummies(testset['label']).values


        xtrain = np.array([np.array(xi) for xi in trainset['xtrain']])
        xvalid = np.array([np.array(xi) for xi in validset['xtrain']])

        xtest = np.array([np.array(xi) for xi in testset['xtrain']])

        #class-based validation
        xvalid_z = np.array([np.array(xi) for xi in \
                        validset[validset.label=='liberal']['xtrain']])
        yvalid_z = np.array([[0,0,1] for _ in range(len(xvalid_z))])

        #class-based validation
        xvalid_c = np.array([np.array(xi) for xi in \
                            validset[validset.label=='conservative']['xtrain']])
        yvalid_c = np.array([[1,0,0] for _ in range(len(xvalid_c))])

        weight = np.ones_like(trainset['label']).astype(float)
        weight[trainset['label']=='liberal']=1.2
        weight[trainset['label']=='conservative']=1.2
        weight = weight / weight.sum()

        sampling_indices = np.random.choice(
            np.arange(xtrain.shape[0]),
            size=trainset.shape[0] * 3,
            p=weight
        )

        xtrain_resampled = xtrain[sampling_indices]
        ytrain_resampled = ytrain[sampling_indices]

In [ ]: xtrain.shape,xtest.shape,xvalid.shape

In [ ]: def get_model(precompile=False,dropout=0.2):
        input_layer = Input(shape=(maxlen, ))


        embedding_layer = Embedding(
            embedding_matrix.shape[0],
            embedding_matrix.shape[1],
            embeddings_regularizer = l2(0.05 * 1 / (16976 * 300)),
            weights=[embedding_matrix],
```

7

```
                    trainable=False
                )(input_layer)


        x = Bidirectional(LSTM(300,
                               recurrent_dropout=dropout,
                               return_sequences=True))(embedding_layer)
        x = Bidirectional(LSTM(300,
                               recurrent_dropout=dropout,
                               return_sequences=True))(x)

        x = Bidirectional(LSTM(300,
                               recurrent_dropout=dropout,
                               return_sequences=False))(x)

        # x = BatchNormalization()(x)

        x = Dense(3, activation="softmax")(x)

        model = Model(inputs=input_layer, outputs=x)

        if precompile == True:
            model.compile(
            loss="categorical_crossentropy",
            optimizer=Adam(),
            metrics=["accuracy"])
        return model

In [ ]: topless.output
```

6.1 fine tune emb after fit

```
In [ ]: model = get_model()

In [ ]: val = LabelEvaluation(
            validation_data=[(xvalid_c, yvalid_c), (xvalid_z, yvalid_z)],
            name=['label_c', 'label_z'],
            label_index=[0, 2])

        lr = ReduceLROnPlateau(
            monitor='val_accuracy',
            factor=0.5,
            patience=2,
            verbose=0,
            mode='auto',
            epsilon=1e-7,
            cooldown=1,
            min_lr=1e-9)
```

8

235

```
        es = EarlyStopping(patience=5, restore_best_weights=True)

        model.compile(
            loss="categorical_crossentropy", optimizer=Adam(), metrics=["accuracy"])

        hist = model.fit(
            xtrain,
            ytrain,
            validation_data=(xvalid, yvalid),
            epochs=100,
            batch_size=512,
            callbacks=[es, lr, val])
```

```
In [ ]: model.layers[1].trainable=True

        hist = model.fit(xtrain_resampled,ytrain_resampled,
                validation_data=(xvalid, yvalid),
                epochs=100,batch_size=512,
                callbacks=[es,lr,val])
```

6.1.1 train/valid/test perf

```
In [ ]: examine(model, xtrain, ytrain)
```

```
In [ ]: examine(model,xvalid,yvalid)
```

```
In [ ]: xvalid.shape
```

```
In [ ]: examine(model,xtest,ytest)
```

```
In [ ]: testz = ytest[:,2] == 1

        examine(model,xtest[testz],ytest[testz])
```

```
In [ ]: testc = ytest[:,0] == 1

        examine(model,xtest[testc],ytest[testc])
```

6.2 KFold

```
In [ ]: trainset, testset = train_test_split(
            train_data,
            test_size=0.2,
            stratify=train_data['label'].values,
            random_state=710)

        y = pd.get_dummies(trainset['label']).values
        X = np.array([np.array(xi) for xi in trainset['xtrain']])
```

9

```
In [ ]: from sklearn.model_selection import StratifiedKFold
        models = []

        skf = StratifiedKFold(n_splits=3)
        for train_index,valid_index in skf.split(X,trainset['label']):
            xtrain, xvalid = X[train_index], X[valid_index]
            ytrain, yvalid = y[train_index], y[valid_index]

            m = get_model(precompile=True,dropout=0.2)

            hist = m.fit(xtrain,ytrain,
                    validation_data=(xvalid, yvalid),
                    epochs=100,batch_size=512,
                    callbacks=[es,lr,val])

            m.layers[0].trainable = True
            hist = m.fit(xtrain_resampled,ytrain_resampled,
                    validation_data=(xvalid, yvalid),
                    epochs=100,batch_size=512,
                    callbacks=[es,lr,val])

            models.append(m)


In [ ]: models

In [ ]: ytest = pd.get_dummies(testset['label']).values
        xtest = np.array([np.array(xi) for xi in testset['xtrain']])

        pred=[]
        for m in models:
            pred.append(m.predict(xtest))


In [ ]: pred = (pred[0] + pred[1] + pred[2]) / 3

In [ ]: labels = np.array(['conservative', 'irrelevant', 'liberal'])

        p = np.argmax(pred,axis=1)
        p_label = labels[p]
        ytrain_label = labels[np.argmax(ytest,axis=1)]

        print (classification_report(
            ytrain_label,
            p_label))
```

10

237

7 Predicts all Files

```
In [ ]: import os
        import glob
        import datetime
        from datetime import timedelta
        INPUT_PATH = '/home/vuongnguyenm/Desktop/dehuman/politica/MAIL_RYAN_AIR/input'
        OUTPUT_PATH = '/home/vuongnguyenm/Desktop/dehuman/politica/MAIL_RYAN_AIR/output'
        os.chdir(INPUT_PATH)
        fpaths = glob.glob(INPUT_PATH+'/*.csv')

In [ ]: fpaths

In [ ]: def hard_label(row):
            if (row['probability_conservative'] > row['probability_irrelevant']) \
            and (row['probability_conservative'] - row['probability_liberal'] > 0.3):
                return 'conservative'
            if (row['probability_liberal'] > row['probability_irrelevant']) \
            and (row['probability_liberal'] - row['probability_conservative'] > 0.3):
                return 'liberal'
            return 'irrelevant'


        def _pred(fpath,models=[]):
        #    try:
                start = datetime.datetime.now()

                fname = fpath.split('/')[-1]

                pred_df = pd.read_csv(fpath,engine='python')
                print(pred_df.columns)
                pred_df['comment'] = pred_df['content']


                pred_df['comment'].fillna('<NA>',inplace=True)
                clean_comment =  pred_df['comment'].apply(clean_str).values


                xpred = tokenizer.texts_to_sequences(clean_comment)

                xpred = pad_sequences(xpred,maxlen=maxlen)


                pred=[]
                for m in models:
                    pred.append(m.predict(xpred))
```

11

238

```python
            pred = (pred[0] + pred[1] + pred[2]) / 3


            pred_max_prob = np.argmax(pred,axis=1)
            pred_max_prob = labels[pred_max_prob]

            pred_df['prediction_max_probability'] = pred_max_prob

            pc = pred[:,0].copy()
            pc_mean = pc.mean()

            pred_df['probability_conservative'] = pc

            pc[pc>pc_mean] = 1
            pc[pc<=pc_mean] = 0
            pred_df['label_conservative'] = pc

            px = pred[:,1].copy()
            px_mean = px.mean()

            pred_df['probability_irrelevant'] = px

            px[px>px_mean] = 1
            px[px<=px_mean] = 0
            pred_df['label_irrelevant'] = px

            pz = pred[:,2].copy()
            pz_mean = pz.mean()
            pred_df['probability_liberal'] = pz

            pz[pz>pz_mean] = 1
            pz[pz<=pz_mean] = 0
            pred_df['label_liberal'] = pz

            pred_df['hard_prediction'] =  pred_df.apply(hard_label,axis=1)



            output_name = OUTPUT_PATH+'/'+fname
            pred_df.to_csv(output_name,index=False)
            end = datetime.datetime.now()
            print (output_name)
            SUCCESS.append((fname,pred_df.shape,(end-start).seconds))
In [ ]: SUCCESS =  []

        FAILURE = []
```

12

239

```
for fpath in fpaths :
    _pred(fpath,models)
```

13

Appendix C. Study 2: Questionnaire

Stimuli

Order 1: Non-Dehumanization option (left) to Dehumanization Option (right)

Imagine that you want to go to a coffee shop for coffee. There are two coffee shops nearby that you consider visiting (Coffee Shop A and Coffee Shop B). Each coffee shop has a different service approach.

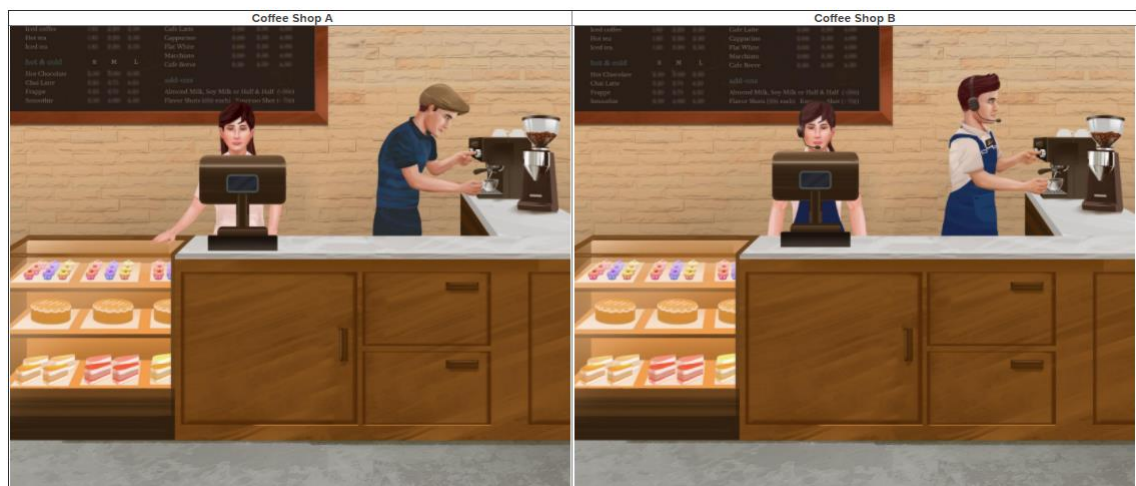**Coffee shop A:** Employees of this coffee shop are trained to follow a personal approach. They are instructed to behave very naturally, expressing themselves freely when talking with customers, and to display their personal feelings when serving customers if they want to. They are also instructed to be polite, professional and deliver excellent service quality.

Coffee shop B: Employees of this coffee shop are trained to follow a robot-like approach. They are instructed to behave in a strictly formal manner, following a specific service script when talking with customers, and not to display their personal feelings when serving customers. They are also instructed to be polite, professional and deliver excellent service quality.

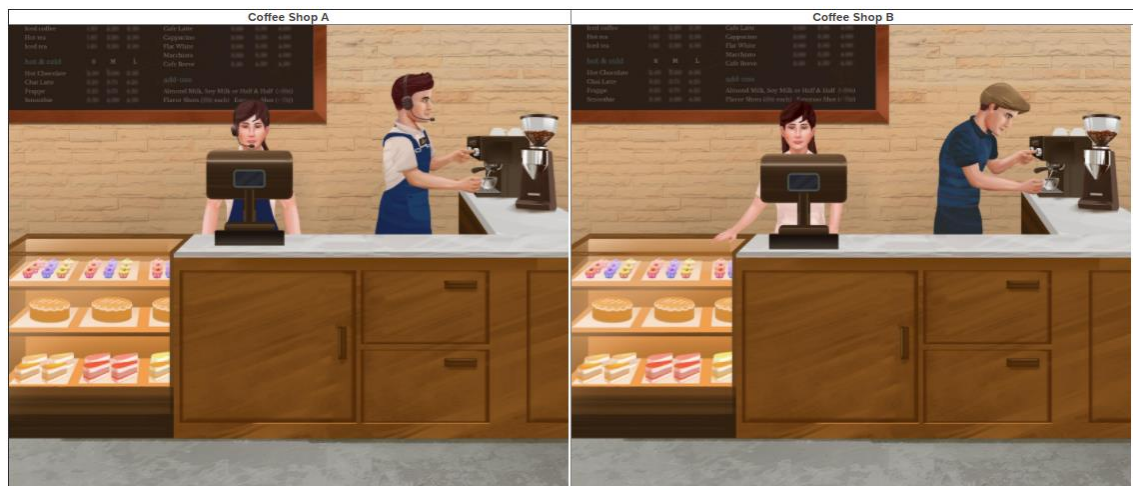The pictures below depict Coffee Shop A and Coffee Shop B:

Order 2: Dehumanization option (left) to Non-Dehumanization Option (right)

Imagine that you want to go to a coffee shop for coffee. There are two coffee shops nearby that you consider visiting (Coffee Shop A and Coffee Shop B). Each coffee shop has a different service approach.

Coffee shop A: Employees of this coffee shop are trained to follow a robot-like approach. They are instructed to behave in a strictly formal manner, following a specific service script when talking with customers, and not to display their personal feelings when serving customers. They are also instructed to be polite, professional and deliver excellent service quality.

Coffee shop B: Employees of this coffee shop are trained to follow a personal approach. They are instructed to behave very naturally, expressing themselves freely when talking with customers, and to display their personal feelings when serving customers if they want to. They are also instructed to be polite, professional and deliver excellent service quality.

The pictures below depict Coffee Shop A and Coffee Shop B:

Measures

Willingness to Use Service

- Which coffee shop are you more likely to visit? [1 = Definitely Coffee Shop A, 7 = Definitely Coffee Shop B]

- If you had to choose, which coffee shop would you visit? [0 = Coffee Shop A, 1 = Coffee Shop B]

Dehumanization Check

- Which coffee shop dehumanizes its employees? [1 = Definitely Coffee Shop A, 7 = Definitely Coffee Shop B]

Political Ideology Check

- Indicate your political views by choosing one of the following choices [1 =Extremely liberal, 7 = Extremely conservative]

- Please indicate the party you most closely identify with: [0 = Democrat, 1 = Republican]

Appendix D. Study 3: Manipulation and Questionnaire

Manipulation

Dehumanization Condition:

Imagine that you want to go to a coffee shop for coffee. You come across a coffee shop which trains its employees to follow a robot-like approach. They are instructed to behave very formally, following a detailed service script when talking with customers, and to not display their personal feelings when serving customers. They are also trained and instructed to be polite, professional and to deliver excellent service quality.

The picture below depicts this coffee shop:
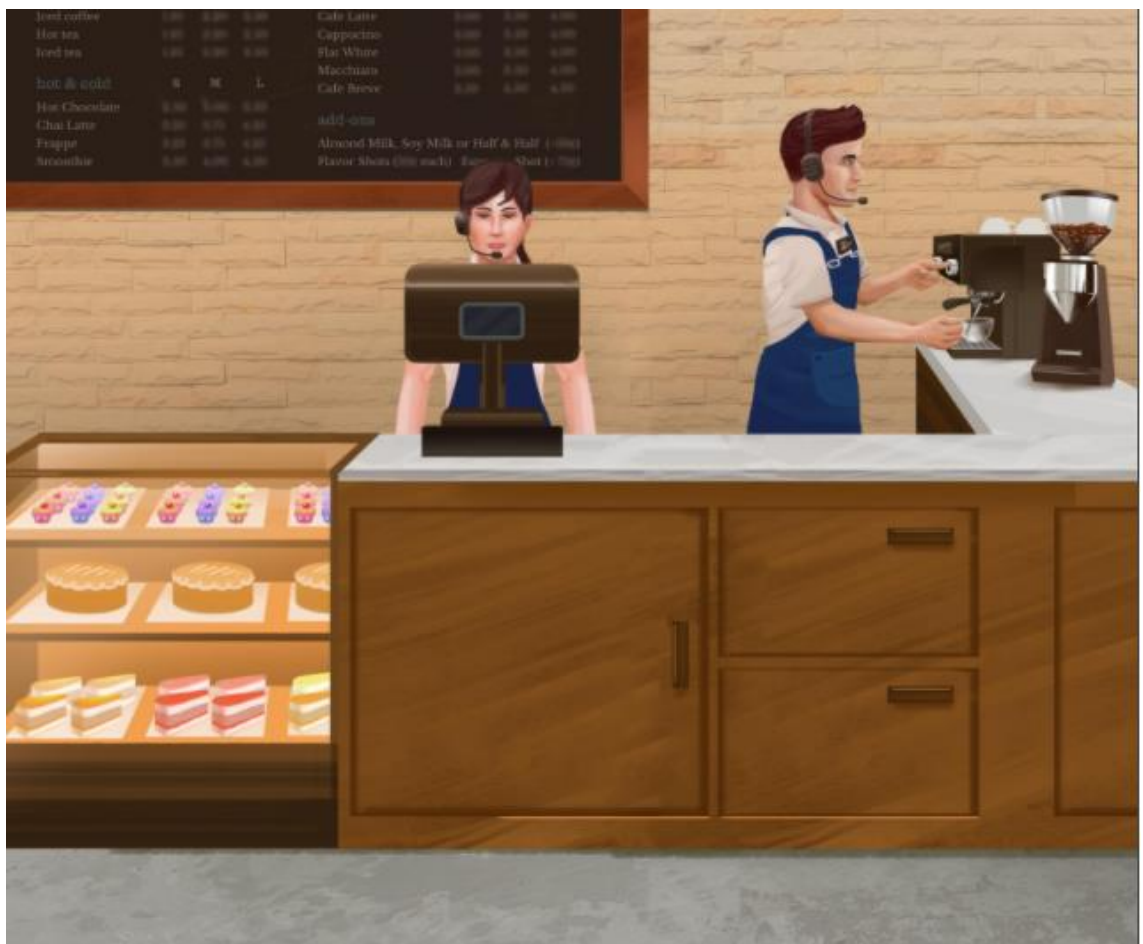
Non-dehumanization Condition:

> Imagine that you want to go to a coffee shop for coffee. You come across a coffee shop which trains its employees to follow a personal approach. They are instructed to behave very naturally, expressing themselves freely when talking with customers, and to display their personal feelings when serving customers. They are also trained and instructed to be polite, professional and to deliver excellent service quality.

> The picture below depicts this coffee shop:
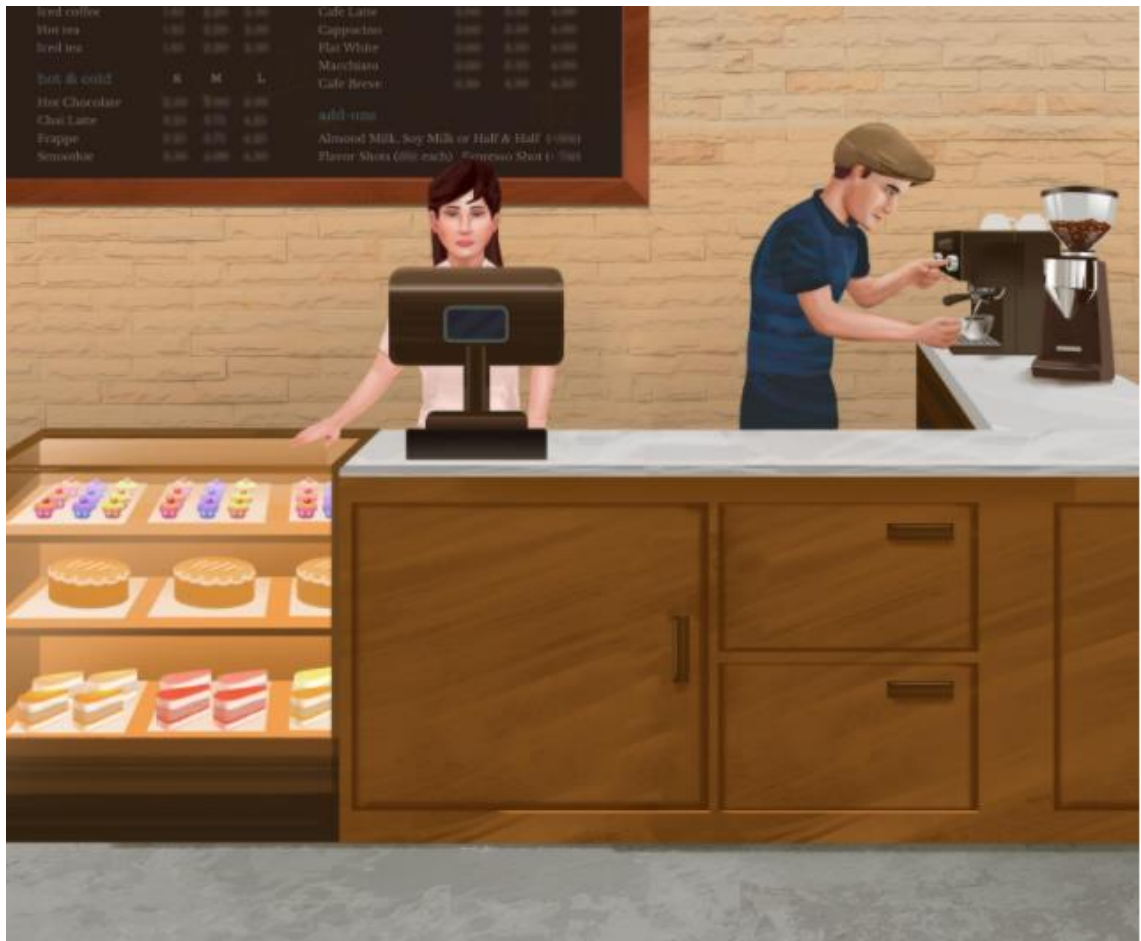
Measures

Willingness to Use Service

▪ After reading the information about this coffee shop, how likely are you to visit this coffee shop?

- After reading the information about this coffee shop, how likely are you to buy coffee from this coffee shop?

[1 = Very unlikely, 7 = Very likely]

Surface acting

- The employees in this coffee shop fake the emotions they display to customers
- The employees in this coffee shop put on a 'mask' in order to display the emotions their boss wants them to display
- The employees in this coffee shop show feelings to customers that are different from what they actually feel

[1 = Strongly disagree, 7 =Strongly agree]

Manipulation Check

- The employees of this coffee shop are instructed not to express emotions
- The employees of this coffee shop are instructed not to express feelings
- The employees of this coffee shop are instructed not to act on their own intentions
- Employees of this coffee will behave like robots
- This coffee shop treats its employees as if they had no free will
- The employees of this coffee shop are dehumanized

[1 = Strongly disagree, 7 =Strongly agree]

Competence

- Please indicate your opinions about the employees of this coffee shop you saw in the picture [1 = Very incompetent, 7 = Very competent]

Political Ideology

- Indicate your political views by choosing one of the following choices [1 =Extremely liberal, 7 = Extremely conservative]

Appendix E. Study 4: Manipulation and Questionnaire

Manipulation

Firm Types (Global Chain Condition)

ABC HOTEL is a member of a global hotel chain with over 30 years of experience in the hospitality industry. ABC HOTEL offers the ultimate exclusive retreat, delivering a truly great service. Every room is equipped with excellent amenities (e.g., free high-speed Wi-Fi, large flat screen TV, air conditioning). The ABC HOTEL chain also has a 24-hour staffed front desk and daily housekeeping. A wide range of shops, restaurants and cafes can also be reached easily on foot from this ABC HOTEL. The average price for a night at this chain hotel is $230.

Firm Types (Independent, Family-Run Firm Condition)

ABC HOTEL is an independent, family-run hotel with over 30 years of experience in the hospitality industry. ABC HOTEL offers the ultimate exclusive retreat, delivering a truly great service. Every room is equipped with excellent amenities (e.g., free high-speed Wi-Fi, large flat screen TV, air conditioning). The independent ABC HOTEL also has a 24-hour staffed front desk and daily housekeeping. A wide range of shops, restaurants and cafes can also be reached easily on foot from this independent ABC HOTEL. The average price for a night at this independent, family-run hotel is $230.

Dehumanization Condition

The chain hotel [Independent, Family-run hotel] ABC HOTEL has the following code of conduct/guidelines for their employees when interacting with customers:

INTERNAL CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction by **sticking to a step-by-step guideline** when serving customers.

2 Employees **are not supposed** to show their **personal feelings** to the customers.

3 Employees **must not** express their personal preferences and tastes to customer when recommending products and services.

4 Employees **must always** wear their **uniform**.

5 Employees **must always** put on their **assigned number tag**.

6 When any problem arises from service encounter, employees **must not deal** with the problem by themselves but referring to the hotel manager.

Non-Dehumanization Condition

The chain hotel [Independent, Family-run hotel] ABC HOTEL has the following code of

conduct/guidelines for their employees when interacting with customers:

INTERNAL CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction by **showing their professional self** when serving customers.

2 Employees **are free to** show their **personal feelings** to the customers, if this could help customer experience.

3 Employees **are free to express** their personal preferences and tastes when recommending products and services.

4 Employees **can** wear their **own clothes**.

5 Employees **can** put on their **name tag**.

6 When any problem arises from service encounter, employees **can try to deal** with the problem by themselves and if not they can refer to the hotel manager.

Measures

Willingness to stay

- How likely would you be to stay at this hotel? [1 = Very unlikely, 7 = Very likely]

Manipulation Check

- The employees of this hotel are not able to express emotions

- The employees of this hotel are not able to express feeling

- The employees of this hotel are not able to act on their own intentions

- This hotel treats its employees as if they were robots

- This hotel treats its employees as if they had no free will

- The employees of this hotel are dehumanized

[1 = Strongly disagree, 7 =Strongly agree]

Political ideology

- Indicate your political views by choosing one of the following choices [1 =Extremely

    liberal, 9 = Extremely conservative]

Appendix F. Study 5: Manipulation and Questionnaire

Manipulation

Dehumanization and Service Standardization

Coffee shop ARIS has the following code of conduct/guidelines for its employees when serving customers:

Dehumanization and Service Personalization

Coffee shop ARIS has the following code of conduct/guidelines for its employees when

serving customers:

CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction **by sticking to step-by-step guidelines** when serving customers.

2 Employees **are not supposed** to show their **personal feelings** to customers.

3 Employees **must not** express their personal preferences and taste to customer when recommending products and services.

4 Employees **must always** wear their **uniform**.

5 Employees **must always** put on their **assigned number tag**.

6 When any problem arises from service encounter, employees **must not deal** with the problem by themselves but referring to the store manager.

To ensure excellent service quality, employees must deliver **personalized service** for each customer so that each customer should have a personalized service experience.

Non-Dehumanization and Service Standardization

Coffee shop ARIS has the following code of conduct/guidelines for its employees when serving customers:

CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction **by acting professionally** when serving customers.

2 Employees **can show** their personal feelings to customers.

3 Employees **are free to express** their personal preferences and taste when recommending products and services.

4 Employees **can** wear their **own clothes**.

5 Employees **should put** on their **name tag**.

6 When any problem arises from the service encounter, employees **can try to deal** with the problem by themselves and if they cannot solve the problem, they can refer to the store manager.

To ensure excellent service quality, employees must deliver **standardized service** for all customers so that all customers should have the same service experience.

Non-Dehumanization and Service Personalization

Coffee shop ARIS has the following code of conduct/guidelines for its employees when serving customers:

CODE OF CONDUCT WITH CUSTOMERS

1 Employees should ensure customer satisfaction **by acting professionally** when serving customers.

2 Employees **can show** their personal feelings to customers.

3 Employees **are free to express** their personal preferences and taste when recommending products and services.

4 Employees **can** wear their **own clothes**.

5 Employees **should put** on their **name tag**.

6 When any problem arises from the service encounter, employees **can try to deal** with the problem by themselves and if they cannot solve the problem, they can refer to the store manager.

To ensure excellent service quality, employees must deliver **personalized service** for each customer so that each customer should have a personalized service experience.

Measures

Willingness to pay

- How much would you be willing to pay for a cup of coffee at this coffee shop?

  (Please write down the price in USD)

Capitalism Associations

- This coffee shop represents a typical capitalist enterprise. [1 = Strongly disagree, 7 =

  Strongly agree]

- To what extent does this coffee shop fit the common stereotypes for a firm in the

  capitalist system? [1 = does not fit the stereotypes at all, 7 = totally fits the

  stereotypes]

Surface acting

- The employees in this coffee shop fake the emotions they display to customers

- The employees in this coffee shop put on a 'mask' in order to display the emotions

  their boss wants them to display

- The employees in this coffee shop show feelings to customers that are different from

  what they actually feel

  [1 = Strongly disagree, 7 =Strongly agree]

Manipulation Check (Dehumanization)

- The employees of this coffee shop are not able to express emotions

- The employees of this coffee shop are not able to express feelings

- The employees of this coffee shop are not able to act on their own intentions

- This coffee shop treats its employees as if they were a robot

- This coffee shop treats its employees as if they had no free will

- The employees of this coffee shop are dehumanized

  [1 = Strongly disagree, 7 =Strongly agree]

Manipulation Check (Service Standardization)

- The service I would get in this coffee shop is…" [1 = the same as it is for other customers, 7 = personalized for me]

- The employees of this coffee shop are instructed to deliver a …" [1 = personalized service for each customer, 7 = standardized service for all customers]

Political ideology

- Indicate your political views by choosing one of the following choices [1 =Extremely liberal, 7 = Extremely conservative]

- Please indicate the party you most closely identify with: [0 = Democrat, 1 = Republican]

Appendix G. Study 1: Elaboration on Yahoo Article' and Mail Article' Contents Regarding Dehumanization of Service Employees

The Yahoo article (Guendelsberger 2019) and the Mail article (Boyle et al. 2017) show visible manifestations of dehumanization of service employees. Particularly, both articles explicitly claim many times that the service firms (i.e., Amazon, Ryanair) dehumanize their employees in the articles' headlines and throughout two articles. The articles' body texts further reflect dehumanizing practices in general. Moreover, by supporting their claims of the dehumanizing practices with evidence and employee interviews, the articles tap into two key elements of dehumanization captured by our definition—that is, the denial of employees' agency and the denial of employees' experience. We elaborate further in the following sections.

a. Mail article

In the article, the author kept repeating the assertion that the cabin crews were not treated as humans and the author called this practice "*modern-day slavery*". Particularly,

> *"Ryanair bosses 'don't treat crew like humans'"* (The article headline)
>
> *"Many Ryanair stewards claimed bosses 'don't treat us like humans'"*
>
> *"It is modern-day slavery…"*

The author justified this assertion by two main lines of argument. First, the author showed evidence that the employees received an unfair payment from Ryanair. While this practice might not directly map onto the denial of human capacities, this shows that Ryanair denies a fundamental financial condition to maintain and develop basic human capacities. Particularly, cabin crews were only compensated barely enough to function as the firm's tool with a limited capacity to think and plan (a denial of agency). For example,

257

> *"Others were repeatedly put on standby at the airport, in eight-hour shifts for which they are paid £30, or £3.75 per hour – less than half the minimum wage."*
>
> *"An exhausted crew member said it was possible to work an eight-hour shift on board an aircraft but be paid for only two hours"*
>
> *"Ryanair stands charged with disgraceful abuse of its cabin crew ... Senior managers should hang their heads in shame." (a quote by an employee)*

Second, the author further provided evidence that Ryanair only regarded its employees as tools for selling products (i.e., a denial of agency) and that it limited employees' ability to maintain personal connections with their families (i.e., denial of experience). For example,

> *"The 28-year-old asked to be moved from her base in Sicily to nearer her home town of Pisa when it became clear her relative was seriously unwell. She said she made 12 requests that were all declined, and that she was told priority for transfers was based on selling performance, not family circumstances."*
>
> *"She described bosses relentlessly pushing cabin crew to hit increasingly unrealistic sales targets"*
>
> *"'You aren't shown any respect as all they care about are sales.'"*
>
> *"One stewardess was told she would be moved to her home country to be with her daughter only if she sold more Pringles crisps."*

b. Yahoo article

Similar to the Mail article, the author kept repeating the assertation that Amazon treats its employees like robots rather than human beings. For instance,

> *"...They Treat Workers Like Robots" (in the article heading)*
>
> *"...day-to-day dehumanizing reality of their workplace."*
>
> *"I felt as if the company wanted us to be robots–never stopping, never letting our minds wander off task."*

"But we're not as good at highly inflexible, repetitive tasks as machines and algorithms."

"And today's technology makes it possible for employers to force workers to suppress their humanity or risk losing their jobs."

"Those Amazon workers want to be treated like human beings"

"...being held to the productivity standards of a robot"

To be treated like robots is to be denied of both agency (thinking and planning) and experience (feelings and emotions) as employees are only allowed to follow and execute the pre-defined scripts. Furthermore, to support this assertion, the articles then reported on the different ways Amazon dehumanized its employees, which clearly fit our definition of dehumanization. First, to ensure "the productivity standards of a robot", Amazon uses technology to rigorously monitor every action of their employees. By doing so, Amazon can ensure that employees must stick to the established script (i.e., denial of agency, interchangeability) otherwise they will be penalized. For example,

"Technology has enabled employers to enforce a work pace with no room for inefficiency, squeezing every ounce of downtime out of workers' days."

"Every single thing I did was monitored and timed."

"After I completed a task, the scan gun not only immediately gave me a new one but also started counting down the seconds I had left to do it."

"It [the scan gun] also alerted a manager if I had too many minutes of "Time Off Task."

"And today's technology makes it possible for employers to force workers to suppress their humanity or risk losing their jobs."

Other dehumanizing elements of the Amazon warehouse are the isolation, which could result in a lack of personal connections with peers (i.e., denial of experience), and the

259

monotony of the work, which once again transform employees into robot-like actions, reinforcing the denial of agency. Particularly,

"...the isolation and monotony of the work left me feeling as if I were losing my mind"

"Overall, low-wage jobs have been so routinized and deskilled"

Appendix H. Study 1: Detailed Analysis and Results When Excluding "Union" Comments Under Focal Articles

Political Ideology (Dummy Variable)

Yahoo. The chi-square test showed that there was an interaction between political ideology and stance on dehumanization on the Yahoo website ($\chi^2 = 86.609$, $df = 1$, $p < .001$). Particularly among conservative readers, there were significantly more people who expressed support comments than people who expressed oppose comments under the focal article ($N_{support} = 714$ vs. $N_{oppose} = 40$, $\chi^2 = 602.488$, $df = 1$, $p < .001$). Among liberal readers, the difference was significantly smaller ($N_{support} = 275$ vs. $N_{oppose} = 88$, $\chi^2 = 96.333$, $df = 1$, $p < .001$). Furthermore, among readers who supported dehumanization, there were significantly more conservatives than liberals ($N_{conservatives} = 714$ vs. $N_{liberals} = 275$, $\chi^2 = 194.865$, $df = 1$, $p < .001$), whereas, among readers who opposed dehumanization, there were significantly more liberals than conservatives ($N_{conservatives} = 40$ vs. $N_{liberals} = 88$, $\chi^2 = 18.000$, $df = 1$, $p < .001$).

Mail. The chi-square test also showed that there was an interaction between political ideology and stance on dehumanization on the Mail website ($\chi^2 = 17.968$, $df = 1$, $p < .001$). Particularly among liberal readers, there were significantly more people who expressed oppose comments than people who expressed support comments under the focal article ($N_{oppose} = 65$ vs. $N_{support} = 18$, $\chi^2 = 26.614$, $df = 1$, $p < .001$). Among conservative readers, the number of people who expressed oppose comments was similar to that of people who expressed support comments under the focal article ($N_{oppose} = 45$ vs. $N_{support} = 50$, $\chi^2 = .263$, $df = 1$, $p = .608$). Furthermore, among readers who supported dehumanization, there were significantly more conservatives than liberals ($N_{conservatives} = 50$ vs. $N_{liberals} = 18$, $\chi^2 = 15.059$, $df = 1$, $p < .001$), whereas, among

readers who opposed dehumanization, there were significantly more liberals than conservatives ($N_{conservatives}$ = 45 vs. $N_{liberals}$ = 65, χ^2 = 3.636, *df* = 1, *p* = .057).

Liberalism (Scale)

We performed the logistic regressions to access the impact of the liberalism scale on the stance on dehumanization. For both Yahoo and Mail datasets, we still found a significant correlation between liberalism and an online stance on dehumanization, such that, the more liberal the readers were, the more likely they were to express an oppose stance on dehumanization (Yahoo: B = -2.902, Wald = 68.125, p < .001; Mail: B = -1.905, Wald = 12.567, p < .001).