

**“How selfish can you possibly be?”: An Appraisal  
Analysis of Facemask Use in Online News Comments**

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Tiivistelmä – Referat – Abstract COVID-19-pandemian myötä vuotta 2020 on varjostanut epävarmuus ja pelko, mikä on havaittavissa sekä perinteisessä että sosiaalisessa mediassa käytävässä keskustelussa. Sosiaalisen median käytössä korostuu eri kanavien rooli sekä tiedon lähteenä että käyttäjien omien näkemysten ilmaisemisen välineenä. Lisäksi sosiaalisessa mediassa korostuu käyttäjien välinen vuorovaikutus. Sosiaalisen median käyttäminen terveyteen liittyvän tiedon lähteenä voi kuitenkin olla ongelmallista, erityisesti jos tieto erkaantuu tieteellisesti todistetusta faktasta. Sosiaalisessa mediassa esiintyvän diskurssin tarkasteleminen voi kuitenkin laajentaa ymmärrystämme käyttäjien suhtautumisesta ja asenteista uhkaavien infektiotautien vaaroihin sekä leviämisen estämiseen liittyviin toimenpiteisiin.  Tämän tutkimuksen osalta COVID-19-pandemiaa lähestytään kasvomaskien käyttöön liittyvän diskurssin tarkastelulla suhtautumisen näkökulmasta. Analyysissa sovelletaan Martinin ja Whiten suhtautumisen teoriaa ( <i>Appraisal theory</i> ), jonka avulla voidaan havainnoida puhujien asennoitumista kasvomaskien käyttöön tarkastelemalla kielessä ilmenevää arvausta. Teorian viitekehys koostuu kolmesta järjestelmästä: asennoituminen ( <i>attitude</i> ), sitoutuminen ( <i>engagement</i> ) ja asteittäisuus ( <i>graduation</i> ). Tämä tutkimus on rajattu asennoitumisen järjestelmään, joka jakautuu edelleen kolmeen alajärjestelmään: tunteiden ilmaisuun ( <i>affect</i> ), toiminnan arvosteluun ( <i>judgement</i> ) sekä esineiden ja asioiden arvottamiseen ( <i>appreciation</i> ). Suhtautumisen teoriassa kieli mielletään systeemisen-funktionaalisen kieliteoriasta lainaten merkitysten viestittämisen järjestelmänä, jossa arvaatio toteutuu puhujan valitessa lukuisien mahdollisten merkitysten välillä.  Tutkimuksen aineistona käytetään yhdysvaltalaisessa Washington Post -lehdessä julkaistua kasvomaskien oikeaoppiseen käyttöön ohjeistavan uutisartikkelin kommentiosiota. Kommentiosio koostuu yhteensä 137 kommentista, joista 114 sisältää kasvomaskien käyttöön liittyvää asennoitumista. Näissä 114 kommentissa ilmenee asennoitumista yhteensä 147 kertaa. Kommenttien analysoinnissa sovelletaan kvalitatiivista analyysia, jonka avulla kommentteista ensin täsmennetään asennoitumisen esiintymät. Tämän jälkeen analyysissa määritellään tarkemmin mitä kasvomaskeihin liittyvää aspektia arvioidaan, mikä on asennoitumisen polariteetti ja mihin arviointi sijoittuu asennoitumisen alajärjestelmissä.  Tulokset osoittavat, että kasvomaskeihin liittyvässä diskurssissa korostuu ihmistoiminnan arvostelu, mikä ilmenee kasvomaskien käyttämättä jättämisen kielteisenä arvosteluna. Myös kasvomaskien sääntöihin sekä sääntöjen toteutumiseen ja valvontaan liittyvät epäjohdonmukaisuudet saavat osakseen kielteistä arvottamista. Tuloksissa ilmenee myös negatiivista asennoitumista poliittisia johtajia ja instituutioita kohtaan sekä näkyvää poliittista vastakkainasettelua, jossa kasvomaskien käyttämättömyys mielletään oikeistolaisen ideologian seuraukseksi. Tulokset viittaavat siihen, että kasvomaskeihin suhtaudutaan myönteisesti ja niiden tärkeys sairauden leviämisen estämiseksi tiedostetaan.			
Avainsanat – Nyckelord – Keywords Suhtautumisen teoria, asennoituminen, arvaatio, kasvomaskit, COVID-19, kommentit, sosiaalinen media			
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## 1. Introduction

The year 2020 has become synonymous with illness and isolation. The COVID-19 pandemic has put an enormous strain on healthcare systems and governments alike to try and contain the illness that, by April of 2021, has claimed the lives of more than two million people globally. In the United States alone, the death toll has exceeded 550,000 since the beginning of the pandemic; the number for the United Kingdom is over 125,000. Here in Finland, 846 COVID-related deaths have been reported by April 6, 2021 (World Health Organization, 2021). COVID-19 was officially declared a pandemic by WHO in March 2020, at which point cases had been identified in 152 countries and in all continents with permanent residents. It is generally understood that the pandemic had its start in Wuhan, China; on December 31, 2019, the WHO was first made aware of a strain of pneumonia with an unknown cause, with the infections being traced back to a local food market.

Extensive measures have been taken to prevent the disease from spreading, ranging from self-isolation to quarantines, the closing of many public institutions, substantial travel restrictions and even total lockdowns of towns and cities. What underlies the entire situation is fear, anxiety and uncertainty, which can be observed, for example, in the internet searches made by people during the pandemic. Du et al. (2021) state that the prevalence of COVID-19 and the resulting fear is one of the catalysts behind the increase in online searches made on emotional and health-related terms, while Zhao and Zhou (2020) observe that the increased “disaster media exposure” during the pandemic has had a negative impact on the mental health of the public. As the pandemic exceeds its first year, its effects become more further pronounced.

COVID-19, almost overnight, affected all aspects of day-to-day life. It has therefore become the hot topic in various media platforms, from traditional news outlets to social media platforms. Emergent infectious diseases (EIDs) and the unfamiliar risks they pose have prompted people to turn to different social media outlets for rapidly updated information; such was also the case during the H1N1 (“swine flu”) outbreaks of 2009 and the EVD (Ebola) outbreaks of 2014 (Tang et al., 2018, 963). The potential of social media in providing health-related information and in promoting safe practices is recognized by health practitioners and public health organizations alike, as they are also using social media as a medium for communicating with the public. Social media can give public officials invaluable information on how the public perceives

the danger of diseases and – perhaps even more importantly – how they perceive the measures that have been put in place to ensure public health and safety.

However, there are still many underlying issues with social media becoming a medium for health-related content. Many of the concerns highlight the abundance of false information and the need for credible sources. The field of infodemiology, or information epidemiology, studies the ways in which health information is spread on the internet and the possible gaps between science-based evidence and the public’s understanding of health-related topics; as the person credited for coining the term, Gunther Eysenbach (2002, 763) states that “health information on the Internet has been described as being discordant with information from evidence-based sources.” Studies of social media use during the rise of EIDs can provide invaluable insight into the discourse on the topic of infectious diseases and the everyday worries of the public as well as the ways in which health information is communicated. Through “infoveillance” (information surveillance) and the analysis of output on online platforms during times of public emergencies, healthcare professionals can monitor the public’s perceptions, attitudes and responses in order to assess the level of information and misinformation as well as the effectiveness of healthcare communication (Chew & Eysenbach, 2010, 1). This, in turn, can be used to further develop health care communication strategies.

Because COVID-19 is a relatively newly emergent disease, research using linguistic approaches to uncover the attitudes and perceptions of the public regarding the pandemic is slowly making itself known. The studies that have so far been conducted tend to approach the subject of discourse surrounding COVID-19 by utilizing social media discourse as their source of data, particularly the microblogging site Twitter. Wicke and Bolognesi’s study (2020) looks at the frequent topics in discourse as well metaphor usage in order to answer questions related to the framing and conceptualization of COVID-19. Abd-Alraqaz et al. (2020) also use Twitter as their source, using corpus linguistic methods to determine and categorize emergent topics. Similarly, Essam and Abdo (2020) explore thematic categories in addition to conducting psycholinguistic analysis on Arab Tweepers during the pandemic; their results reveal that affective statements often include negative evaluations and emotions such as sadness. All of the above-mentioned studies highlight the societal upheaval that the pandemic has resulted in, which is reflected in the topics and themes of discussion. There is little doubt that many similar studies

will be conducted in the near future due to the relevance of the topic not only to linguists, but also to health and government officials.

The current study aims to explore the online discourse surrounding COVID-19 from the angle of attitudinal expressions regarding the use of facemasks in social media. COVID-19 and the various aspects of it are undoubtedly addressed in all platforms of social media and for the sake of providing a focus, the platform chosen for this study is that of online news comment sections. Online news comment sections offer variety and a way to explore a platform which can easily be overlooked in favor of certain larger social media platforms, such as Twitter, Facebook or Instagram. In reality, online news comment sections are a well-established platform within social media, where an audience member reacts to and expresses evaluations on various aspects of the text while also referring to their own personal experiences and opinions regarding shared issues. The platform also allows for interaction between other commenters in a public sphere; there is thus dialogue not only between an individual commenter and the news piece, but also between commenters. The data of this study consists of a single comment thread on a news article published by The Washington Post. The article in question outlines the proper and correct use of facemasks; thus, most of the comments in the thread deal with various issues related to the use of facemasks and the rules and regulations surrounding their usage.

Facemasks are an essential protective measure used to contain the spreading of the disease and have subsequently become a widely recommended and sometimes even actively enforced regulation in various public settings. During the pandemic, facemasks have become a fixed part of the street scene, as have posters and signs urging individuals to use them. The aim of this study is to explore the evaluative content of comments concerning facemasks, through which the attitude of the commenters regarding an integral safety measure become apparent. The objective of this study is to glean insight into the positive and negative evaluations speakers make regarding the use of facemasks and the specific aspects of mask use that are the targets of evaluation. Additionally, the aim is to examine the kinds of attitude that are expressed in relation to various aspects of mask use. In order to study the expressed attitude of the commenters, this study makes use of Appraisal theory, as outlined by its primary creators, Martin and White (2007). Appraisal theory provides a systematic method for studying the various ways attitude is expressed through language, beyond that of simple polarity. The Appraisal theory framework

consists of three overarching systems – ATTITUDE, ENGAGEMENT and GRADUATION – through which expressions of evaluation can be examined in depth. The primary focus of this study is the system of ATTITUDE, which is concerned with the categorization of attitudinal meanings. Thus, the research question guiding this study is as follows:

**What kinds of evaluations do commenters make regarding the use of facemasks?**

This study combines Appraisal theory with qualitative analysis and close reading of reader comments to explore its research question. The objective is to provide specific targets of evaluation as well as the types of attitude expressed, in accordance to the system of ATTITUDE outlined within Appraisal theory. In Chapter 2, the theoretical background of this study is explored in further detail, after which the data and methods of the current study are presented in Chapter 3. Chapter 4 of this thesis contains the analysis of the data and in Chapter 5 we turn to the discussion of the results. Chapter 6 presents the conclusions of this study.

## 2. Theoretical background

This section presents the theoretical framework used in this study. The chapter first introduces the field of Systemic Functional Linguistics (SFL), after which the theory will be narrowed down to Appraisal theory. This chapter also introduces previous research where Appraisal theory has been applied as well as COVID-19 research conducted through linguistic approaches. Lastly, as this study uses online news comments as its data, a section of this chapter is dedicated to exploring the theoretical background of online comments sections as a source of data.

### 2.1. Systemic Functional Linguistics

The motivation behind studying evaluative language is rooted in the attempt to examine the processes through which thoughts, opinions and stances are constructed. Language provides a medium through which values and culture are communicated via self-expression. We express evaluations about the world around us; these evaluations are interpersonal in nature and their function is primarily to establish and express solidarity with those we are interacting with. Evaluation is an integral part of human thought and linguistic expression; we learn the basics of evaluation very early on, from evaluative assessments such as *good/bad* or *positive/negative* (Alba-Juez & Thompson, 2014, 4-6). Evaluations, just as values, are context-dependent and can thus change depending on time and setting. We negotiate our evaluations to different degrees through dialogue with others; for example, we either welcome the input of others, or we reject them.

Alba-Juez and Thompson's work (2014) on evaluative language establishes that evaluation is inherently multi-faceted; what is outwardly expressed may contain covert evaluations meant to evoke other, more context-dependent meanings. Evaluation is also not bound to the single act of producing a text or an utterance, but rather occurs in phases through dialogue with previous texts as well as in preparation for the responses and reactions that the text might receive (Alba-Juez & Thompson, 2014, 7-8). This is rooted in Bakhtinian philosophy regarding intertextuality, which regards each utterance as "primarily a response to preceding utterances" while also including within it "an expectation of a response, agreement, sympathy, objection, execution, and so forth" (Holquist et al., 1981, 91, 69). This definition holds within it an understanding that evaluation, and arguably all linguistic expression, is a dynamic inter(con)textual event.



The language of evaluation and the meaning-making systems involved within it have been the focus of SFL. SFL regards language as a semiotic system with what Halliday (2013, 21) has coined as *meaning potential*, realized through a system network involving a set of alternative choices. Halliday's version of SFL sees language as a stratified system of signs, wherein lexicogrammar and semantics act as meaning-making resources (the 'content plane') and phonology acts as the medium through which meaning is expressed (the 'expression plane') (Halliday & Matthiessen, 2014, 26; Martin, 2016, 38). Martin and White (2007, 8-9) present the language strata in terms of abstractions; the first abstraction being phonology and phonemes (or graphology in written texts), the second abstraction covering grammar and lexis, and the third abstraction consisting of discourse semantics. The concept of systems is crucial in SFL, as it regards all texts as "a product of ongoing selection in a very large network of systems" (Halliday & Matthiessen, 2014, 23). The system represents all the possible meanings a speaker could make when producing a text in any given setting. The defining factor in language becomes choice, which is described as a "fine-tuned activator of systemic paths and their realisations" (Hasan, 2013, 282). Choice is thus the prerequisite of meaning; when making choices on the language we use, we make choices regarding what we mean:

All human activity involves choice: doing this rather than doing that. Semiotic activity involves semiotic choice: meaning this rather than meaning that. The limiting case is that of choice in polarity: doing this rather than not doing it, meaning this rather than not meaning it (Halliday, 2013, 15-16).

Still, choice is not always conscious or intentional, but rather, automated (Matthiessen et al., 2010, 69). However, choices can be brought into conscious attention and become the object of reflection (Halliday, 2013, 7).

SFL has had a wide influence on various fields of study, which have adopted and built on its central concepts and frameworks. One such subfield is Appraisal theory. SFL, as defined by Halliday, assumes the existence of three basic functions of language – called *metafunctions* – which provide a tool through which language can be interpreted. The metafunctions aim to describe the functions of language in each context of its occurrence. There are three metafunctions: the ideational metafunction, the interpersonal metafunction and the textual metafunction. The ideational metafunction, also called the 'language of reflection', encompasses the entirety of the language involved in expressing the human experience. This includes the

language involved in processes such as the naming of actions, objects and various phenomena. The interpersonal metafunction, or the ‘language of action’, relates to the language involved in the enactment of our social and personal interactions and relationships with those around us. This covers the language used when interacting with others and when sharing feelings, attitudes and opinions with those around us. Lastly, the textual metafunction is concerned primarily with the way the ideational and interpersonal functions are structured into cohesive flows of information (Halliday & Matthiessen, 2014, 30-31; Martin & White, 2007, 7). Appraisal theory, which is the primary theory applied in this study, is concerned with the interpersonal metafunction of language. The following two sections explore Appraisal theory in further detail.

## **2.2. Appraisal theory**

Appraisal theory has developed the framework for assessing and analyzing attitudinal texts and utterances the farthest (Thompson, 2014, 48). The outline for the Appraisal theory model has been created and developed by Martin and White in the last few decades, building largely on the view of language expressed in SFL. Appraisal is concerned with the second metafunction of language, that is, the construction of interpersonal meaning through language. This is because Appraisal theory involves analyzing the various emotions and opinions speakers express and the degree of intensity to which said feelings are conveyed. Essentially, Appraisal theory offers a way to assess the evaluative language of speakers conveyed through expressions of emotion (Zappavigna, 2012, 51). White (2015, 1) states the following regarding Appraisal theory:

[Appraisal] provides for analyses of those meanings by which texts convey positive or negative assessments, by which the intensity or directness of such attitudinal utterances is strengthened or weakened and by which speakers/writers engage dialogistically with prior speakers or with potential respondents to the current proposition. These meaning-making resources are grouped together as the “language of evaluation.”

Appraisal theory is based on the categorization of appraisal and evaluation; the argument is that evaluative assessments are a result of emotional responses and judgements on the topic at hand and that these responses can be categorized systematically for their evaluative content. Appraisal categories work on the premise that language is a meaning-making resource through which we can observe positive and negative evaluations as well as the degree of intensity with which the evaluation is expressed. The degree of intensity is often expressed through linguistic cues meant to weaken or strengthen the element of evaluation. Expressing a certain evaluation is seen as a

choice between a wide category of alternatives, all of which have the potential to express a different attitudinal meaning to various different degrees. The theory also highlights the existence of various voices at play in any given utterance and the ways in which texts are constantly in dialogue with previous texts while also taking into consideration the potential responses to the text. By studying evaluative language, the objective is to gain access to personal evaluations and stances speakers adopt regarding both phenomena (the object of appraisal) as well as metaphenomena (the propositions made regarding the object) (White, 2015, 1).

The Appraisal model has broadly categorized the functions of a given utterance into three interconnected subsystems or domains. These are ATTITUDE, ENGAGEMENT and GRADUATION (hereafter referred to in lowercase), all of which branch out into smaller subsystems. The most central of the systems is the system of attitude, which covers the area of feelings, emotions, emotional reactions as well as evaluative and judgmental assessments. The engagement system explores the ways speakers engage with other speakers or voices when performing evaluative assessments and, as such, is concerned with “the play of voices around opinions in discourse” (Martin & White, 2007, 35). The graduation system refers to the degree of intensity with which evaluation is expressed, as attitudinal meanings and expressions of engagement can be graded (weakened or strengthened) through linguistic cues (Martin & White, 2007, 35; Matthiessen et al., 2010, 59, 88, 108). Combined, these systems provide us with a tool for analyzing the interpersonal positioning of speakers. Figure 1 below presents a visualization of the Appraisal model and its main systems.

The attitude system, which is concerned with the way emotional assessments and reactions are conveyed through language, contains three subsystems: AFFECT, JUDGEMENT and APPRECIATION (hereafter referred to in lowercase), all of which are gradable in terms of polarity (positive/negative) to different degrees. At the core of the system is affect, through which negative and positive emotions such as happiness, satisfaction, security and their opposites are expressed (Martin & White, 2007, 42) Naturally, affect also includes feelings *about* things, such as liking, disliking, hating or loving (Thompson, 2014, 50). Affect can be realized through a range of grammatical structures; as a quality (*they were **happy/sad***), as a process (*they were **delighted/disappointed** by the surprise*) or as a comment (***luckily/sadly**, they had left*) (Martin & White, 2007, 46).

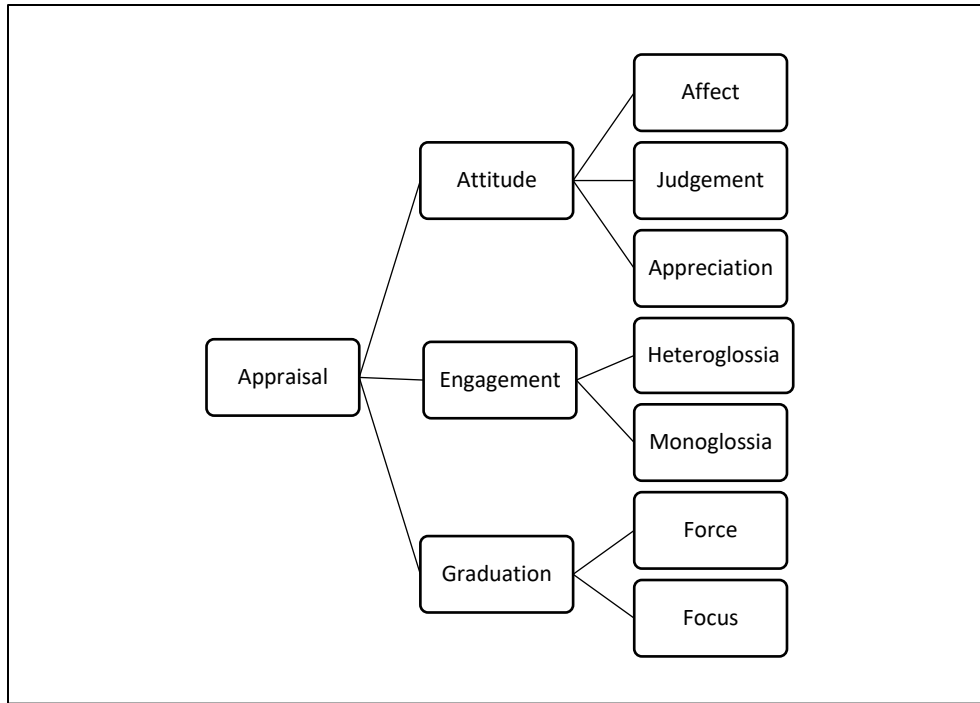


Figure 1. *The Appraisal systems, modified from Martin and White (2007)*

The judgement system deals with normative assessments about people and their conduct. Judgement regards people and their behavior in terms of ethics, morality and “other systems of conventionalized or institutionalized norms” (White, 2015, 2). Through judgement, statements can be made about whether certain kind of behavior or conduct is welcomed or frowned upon. Through examining judgement, it is possible to answer questions relating to the attitudes that are expressed regarding the witnessed character, behavior or action; is the target of judgement criticized and condemned, or praised and applauded? The judgement system makes a further distinction between evaluation that hinges on social esteem and social sanction. Social esteem includes assessments of normality in relation to how special something is (*it is **normal/odd***), how capable someone is (*they are **powerful/weak***) or how tenacious someone is perceived to be (*they are **reliable/unreliable***). Social sanction deals with judgements from the perspective of societal duties; the target of judgement can be assessed on their veracity (*they are **honest/deceitful***) or how far beyond reproach they are in terms of propriety (*they are **selfish/selfless***) (Martin & White, 2007, 53). Both social esteem and social sanction assume the existence of shared norms and values, through which assessments of behavior and, especially behavior deviating from norms, can then be expressed.

The appreciation system, in contrast to the judgement system, covers matters relating to aesthetic evaluation of objects and phenomena. While judgement conventionally contains evaluations of human behavior and characteristics, the target of appreciation can be various phenomena, states of affair and processes as well as non-human objects such as artifacts and texts, all of which can be evaluated in terms of their “aesthetic qualities, their potential for harm or benefit, their social salience, and so on” (White, 2015, 2). Through examining appreciation we are able to answer questions such as “what is something like?” in terms of the system’s subcategories of reaction, composition and valuation. With reaction, the evaluations center around the impact or quality of the object of evaluation; we can thus consider questions such as “did it grab me?” or “did I like it?” (*it is interesting/boring* or *it is amazing/terrible*, respectively). The composition of an object or phenomenon can be appreciated from two angles, both of which evaluate the object in terms of harmony and coherence; these angles are that of balance (*it is harmonious/discordant*) and complexity (*it is clear/unclear*). Valuation deals with the perceived value of the object or phenomena, or how worthwhile it is thought to be (*it is useful/useless*). To summarize, the attitude system helps us explore not only the attitudinal assessments of speakers, but also the cultural context behind producing certain kinds of meanings:

Overall, the categories are claimed to reflect not only the conventional means of expressing appraisal in a given language, but more fundamentally the feelings and values of a culture, the attitudes which it is ‘normal’ for members of that culture to have and the parameters within which they ‘place’ their experiences (Thompson, 2014, 50).

So far, the examples have presented evaluation as a relatively straight-forward process. However, attitude and evaluative meanings are not often presented in such neatly distinguishable and explicit ways. For this reason, the attitude system also makes a distinction between inscribed and invoked attitude; in other words, attitudinal meanings that are explicitly stated in texts and the kinds of meaning that are more covertly expressed by implication and association (Macken-Horarik & Isaac, 2014, 68; Thompson, 2014, 51; White, 2015, 3). Such is the case in the following example from a news article:

*In 2020, it's possible Trump could win 5 million fewer votes than his opponent — and still win a second term.* (Wasserman, NBC News, July 19, 2019)

Similar to the example White (2013, 3) presents on the case of George W. Bush in the

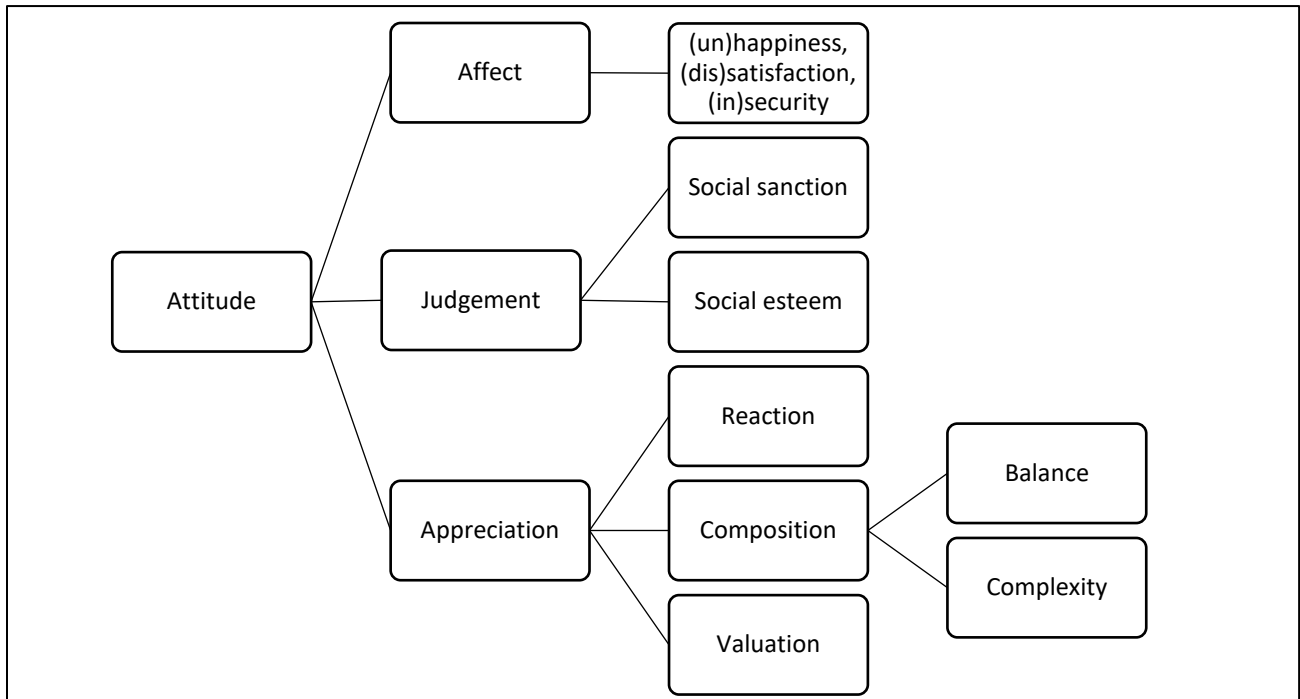


Figure 2. *The attitude system.*

Presidential Election of 2000, there is no exact linguistic token which explicitly indicates appraisal, yet negative sentiment is nevertheless detectable. The negative connotation in this quote is geared towards either the election process in the United States, which makes it possible for a candidate with fewer votes to be elected, or more generally towards Trump as a president, or perhaps even both. In reality, many of the evaluations speakers make are similar to the example shown above, which can be difficult to interpret out of context.

The second overarching system within the Appraisal model is that of engagement. Engagement covers the dialogistic positioning of a speaker when performing evaluation or reporting on previous texts (White, 2015, 4-5). Engagement can be said to refer to a “play of voices,” or the way a speaker acknowledges and engages with other voices and alternative opinions and, more importantly, how they position themselves according to them (Martin & White, 2007, 94). Speakers use language to negotiate their degree of alignment with the voices and stances of other speakers; this act of alignment or misalignment is a testimony to the speaker’s agreement with the evaluative statements and assessments made by said alternative voices. Martin and White (2007, 95) conclude that speakers are most often engaging with other voices when making assessments and that they actively invite others to share their beliefs:

We note, in this regard, that when speakers/writers announce their own attitudinal positions they not only self-expressively ‘speak their own mind’, but simultaneously invite others to endorse and to share with them the feelings, tastes or normative assessments they are announcing. Thus declarations of attitude are dialogically directed towards aligning the addressee into a community of shared value and belief.

Where engagement is concerned, analysts are interested in how certain, aligned, or committed the speaker is to the “truth value” of the given statement (White, 2015, 5). In the following examples, the difference in alignment is evident:

- i. There is no doubt that the government has been lying about the COVID-19 vaccine.*
- ii. The government has obviously been lying about the COVID-19 vaccine.*
- iii. In my opinion, the government has been lying about the COVID-19 vaccine.*
- iv. It is possible that government has been lying about the COVID-19 vaccine.*
- v. They claim that the government has been lying about the COVID-19 vaccine.*

The implications of engagement in these examples allows speakers to position themselves in terms of the evaluation being made. The first two examples reject the possibility of differing voices, while the remaining three examples acknowledge and welcome them. This distinction makes up the two subsystems of engagement: contraction and expansion. Contractive dialogism excludes, rejects or challenges alternative and differing positions and can “constrain on the possibility for alternatives” (Matthiessen et al., 2010, 79). This is evident in the first two examples above, where the government lying is seen as the truth. Expansive dialogism, in contrast, acknowledges or “actively makes allowances for dialogically alternative positions” (Martin & White, 2007, 102). This can be seen in the latter three examples, where attributions have been added to make it apparent that alternative positions on the subject are possible.

Both contraction and expansion are examples of heteroglossia, which has been alluded to when referring to Bakhtinian philosophies (Holquist et al., 1981). Texts are either heteroglossic or monoglossic; they are either dialogic in the sense that they contain references to previous or following texts, or they are bare assertions, which make no overt references to alternative voices (Martin & White, 2007, 92, 99). An example of a bare assertion could be any structure where something is taken to be evident in a way that no references need to be made, such as in the following example:

- vi. The government is discussing the COVID-19 vaccine.*

However, even bare assertions can in some cases contain a potential degree of dialogism. While Example (vi.) shown above does not engage with other voices in the same manner as the examples before it, this does not necessarily indicate that no positioning has been made on the part of the speaker. In monoglossic texts, the information is presented as “dialogistically unproblematic” (White, 2015, 6) and, as such, assumes that contradictory voices do not exist, which is a form of stance-taking by itself.

The last model in the Appraisal system is that of graduation, which relates to the gradeability, or the degree of intensity, with which attitudinal meanings are conveyed. Graduation contributes to the upscaling or downscaling of evaluative expressions (Aloy Mayo & Taboada, 2017, 44). Graduation works from the angles of force and focus; force is concerned with the way meanings are “strengthened or mitigated”, while focus deals with the softening and sharpening of the boundaries of semantic categories (White, 2015, 4). Force is relatively straightforward to witness when comparing the structures of *I think COVID-19 is **extremely** dangerous* (upscale) and *I think COVID-19 is **kind of** dangerous* (downscale). Sometimes, intensification can be embedded or fused within the lexical item instead of being achieved through the use separate lexical items such as *extremely* or *kind of*. For example, we can consider the difference between the constructions of *I think COVID-19 is **extremely dangerous*** and *I think COVID-19 is **deadly***. In contrast to force, focus deals with the gradeability of categories that normally are not gradable or scalable, but can nonetheless be sharpened or softened: *nurses are **true** heroes during the pandemic* or *nurses are heroes **of sorts*** (Martin & White, 2015, 137). Graduation, in this sense, can determine the degree of intensity when it comes to both attitude as well as engagement.

This study adopts Appraisal theory as its primary framework as it provides a comprehensive system through which evaluative language can be analyzed from multiple angles and perspectives. The objective of this study is to gain access to the different attitudes online commenters have regarding the use of facemasks and through Appraisal theory, these can be studied systematically. As attitudes are the primary focus of this study, Appraisal theory offers a framework that has attitudinal meanings at its very core. The following section will introduce previous applications of Appraisal theory where it has been used to analyze the evaluations of speakers towards different phenomena in various different contexts.



### **2.3. Previous applications of Appraisal theory**

Appraisal theory has been applied in a variety of different fields. One such field is that of news reporting and journalism. White and Thomson (2010, 13) identify the three voices (or ‘keys’) in news reporting as that of the ‘reporter voice’ and the ‘correspondent voice’ and ‘commentator voice.’ All of these voices are shown to differ in terms of the attitudinal meanings expressed; reporter voice, for example, is less likely to include inscribed attitude, as is typical for the coverage of so-called hard news, while correspondent voice has less constraints on the expression of attitude despite aiming towards a similar style as hard news. In contrast, commentator voice is more laid back and even welcomes the writers’ subjective opinions, which is typical for genres such as editorials or opinion pieces. In the same work edited by White and Thomson (2010), Appraisal theory is used to explore different aspects of journalistic voice, such as the use of attitude and engagement in hard news and reporter voice in Vietnamese and Japanese news texts (Van & Thomson, 2010; Thomson et al., 2010), both of which reveal that attitudinal meanings could be detected despite the genre of hard news. A similar study in Finland on the objectivity of Swedish-language news broadcasting of political conflicts shows that while reporting is “formally impartial”, reporters can potentially risk objectivity when emphasizing statements made by interviewees and by structuring the narrative of the text around said statements (Höglung, 2010, 233).

Apart from exploring the realizations of journalistic voice, other studies focus on the use of different systems within Appraisal theory. Soo-Guan Khoo et al. (2012) use Appraisal theory to explore the sentiments of writers reporting on the economic and war-related policies of Former United States President, George W. Bush, and Former President of Iran, Mahmoud Ahmadinejad. The researchers first establish the Appraisal groups, the appraiser, the object of appraisal and the degree of engagement. Evaluation is then analyzed in terms of polarity, type of sentiment, the actors involved in the process of evaluation, and the way sentiment is expressed. Soo-Guan Khoo et al. deem the Appraisal model useful in general, although they identified the subtlety of expression in news texts as a potential difficulty in analysis. Bednarek and Caple (2010) combine Appraisal theory with a multimodal approach when assessing evaluation in Australian environmental news and explore the interplay between text and image, including image captions. The study concludes that approximately 40% of the headings used as data include an inscribed negative or positive attitude. In addition, images are seen as enhancing

interpersonal meanings when it comes to the text, while image captions provide a way to up-scale evaluation in terms of graduation.

While not strictly focusing on news stories, O'Donnell's work (2013) applies Appraisal theory in studying identity construction. Speakers assume identity first through expressing affiliation with certain communities and with the values they endorse. O'Donnell notes that identity through group affiliation can be shown by expressing positive evaluations about the group; consequently, when one wishes to not affiliate with a specific group, said group will be the target of negative evaluations. Alignment with a group or a set of values can then be intensified through graduation; the more one affiliates with a group or a set of values, the more evaluations are upscaled. This kind of work focusing on identity, group affiliation and values expressed through evaluation can pave the way for studies that analyze underlying political and ideological viewpoints.

The expression of political ideologies has also been studied in the context of social media platforms. Aloy Mayo and Taboada (2017) study *Cosmopolitan's* CosmoVotes comment sections and focus on reader responses to political topics relating to women's rights (abortion rights, wage inequality, women's voting) and proceed to compare these evaluations with those expressed by the editors in the articles. The analysis on reader evaluation shows that commenters express negative views on the political situation, women's voting, election practices and occasionally the editors of the magazine. Commenters also express negative evaluations towards fellow commenters, especially when disagreeing with each other's arguments. The articles show more appreciation than judgement; appreciation is shown to certain candidates and the ideas they endorsed, while judgements are made regarding the political situation and leaders in the United States. The opposite is true of the comments, which contain more judgement than appreciation. Such studies have the potential to shed light on important issues relating to the political atmosphere as well as the ideologies and values held by the general public. Online discourse also has the power to shape the political landscape, which further expands the role of social media as the medium through which the spread of ideological trends can be observed.

An increasingly important platform is that of microblogs, such as Twitter. There are many studies applying Appraisal theory to sentiments expressed in tweets for a variety of purposes. Dragos et al. (2018) explore extremist views in tweets in France, creating their own ontology to

better fit the purpose of the study; this identifies six main concepts when analyzing the data (attitude, engagement, graduation, polarity, orientation and modifiers). Korenek and Šimko (2014) calculate “appraisal scores” through a pseudo-algorithm to better assess the sentiments of users regarding products and services. Zappavigna’s studies (2011, 2012, 2014) highlight the importance of social media as a bonding platform where values and experiences are shared. Her studies apply Appraisal theory with a focus on bonding, affiliation and solidarity.

As the COVID-19 pandemic is still a relatively new phenomenon and, there is not an abundance of linguistic research published as of yet, although there is no doubt that this will change in the near future. While the studies that have so far been published have not applied Appraisal theory, they do provide valuable insight into the discourse surrounding the pandemic. There is already a variety of studies that look at COVID-19 discourse on social media platforms, Twitter in particular. Wicke and Bolognesi (2020) study commonly occurring topics and figurative language through topic modelling. The figurative language aspect of the research looks at war metaphors in relation to disease control and treatment. The self-collected corpus contains 203,756 tweets from March 2020, mined through relevant hashtags. Through the use of Latent Dirichlet Allocation (LDA), a typical topic modelling algorithm, the data is sectioned into the topic categories of (1) communications and reporting; (2) community and social compassion; (3) politics; and (4) reacting to the epidemic. The algorithm also produces finer subcategories. Each category includes its own lexical items as well as their weightage (importance) in the category; for example, items such as *pandemic*, *news*, *latest* or *update* are important in the communications and reporting category, while *home*, *time*, *help* and *stay* are important in the categories capturing the public’s reacting to the epidemic. Furthermore, the study reveals that 5.32% of the tweets include metaphors of war, conceptualizing the pandemic through metaphors of fighting, battles and threats. This indicates that war metaphors are significant in framing public discourse around COVID-19.

Abd-alraqaz et al. (2020) also look at emerging themes and topics, although through the lens of public concerns. Over 16,000 tweets from early February to mid-March of 2020 reveal four themes and twelve topics within these themes. The overarching themes relate to the origin of COVID-19 (China, outbreaks); the source of the novel coronavirus (meat and bioweapons); the pandemic’s impact on people and countries (death, fear, travel, economy, panic buying, racism);

and methods for decreasing the spread (masks and quarantine). Based on the results of the study, the impact of the pandemic on people, countries and corporations is the most pressing concern.

Lastly, Essam and Abdo's study (2020) provides a glimpse into non-English discourse. In their research on Arab Twitter users, they analyze perceptions and feelings related to COVID-19. Many of the themes and topics are similar to those observed in the study by Abd-alraqaz et al. (2020), such as anxiety about outbreaks and increasing infections, concern over the pandemic's effects on economy and concern over medical precautions such as masks and sanitizers. Another similarity is the issue of racism and hostility towards the Chinese, especially the Chinese government in keeping silent about the outbreak. In the political field, governments and public figures are faulted for insufficient reactions to the pandemic. As a contrast from the previous studies, Essam and Abdo's research also mentions themes such as conspiracy theories and metaphysical and religious content, which views the pandemic as a form of divine punishment.

To conclude, Appraisal theory has been used as a framework in various different studies across different fields, all of which aim to examine the different manifestations of attitudinal meanings in different types of texts. Appraisal theory has been shown to be applicable to various different targets and fields from journalism to the language of social media as well as identity and ideology construction. The current study combines Appraisal theory with aspects of COVID-19 discourse, which has previously been studied through topic modelling methods and thematic analysis. Thus, this study provides a fine-grained analysis of evaluation. This study also uses social media as its source, specifically online news comments. The following section introduces said platform and its characteristics.

#### **2.4. News comment sections as a source of data**

News comment sections have been the focus of many linguistic studies, as they are a medium of social media that allows for public discussion of relevant events as well as interaction between commenters (Weber, 2014; Bokzkowski & Mitchelstein, 2011, Tenenboim & Cohen, 2013). Bokzkowski and Mitchelstein (2011, 3) propose that commenting on news stories constitutes as an act of human interactivity, which leads to communication between a wider network of audience members who do not know each other. Furthermore, Kangasputa (2020, 266) calls online commenting platforms "public arenas for participation in the public sphere." Social media is to be understood as a concrete space similar to physical spaces such as town meetings, where

public discussion, participation and interaction is made possible for everyone (Kangasputa, 2020, 269). Tenenboim and Cohen (2013, 3) describe the medium of online commenting spaces similarly as a “virtual city square” and observe that there are three distinct trends within the academic study of comment sections: (1) studies that utilize the research on online comments as part of a wider discussion on participatory journalism, (2) studies that focus on the various channels of user commentary, and (3) studies that use online comments as a tool for generating information. Weber (2014, 942) also identifies the content of comments and their influence on reader perception as interests within the field. Overall, the act of commenting on news articles and the opportunity to participate has vastly changed the dynamic between news producer and news consumer within online journalism; consumers are no longer merely readers and audience members, but rather users who take part in the process of media production through various methods (Kangasputa, 2020, 267; Ruiz et al., 2011, 464). News comment sections provide commenters with an opportunity to express their views, exchange information and engage with other commenters as well as with the news piece itself, which increases public participation, the construction of public opinion and, ultimately, democratic deliberation (Van Duyn et al., 2021, 182; Artime, 2016; 2, Weber, 2014, 942).

Several studies focus on what motivates commenters to contribute to public discussion (Weber, 2014; Boczkowski & Mitchelstein, 2011, Tenenboim & Cohen, 2013). Weber’s study focuses on the level of participation and interaction and concludes that news factor has an effect on both participation and interaction to varying degrees. The different aspects of a news piece affect the level of participation and interaction; proximity or the degree to which a news piece deals with matters that directly affect the readers’ own community increases both participation and interaction between commenters, as does the perceived impact on a particular social group. Other factors that lead to increased commenting include continuity and frequency, while interactivity is increased in news articles detailing controversy and damage (Weber, 2014, 950-951). Boczkowski and Mitchelstein (2011) observe that commenting increases during times of political upheaval and increased political activity. During such times, comments are often left under news articles that deal with public matters, such as topics relating to politics, economics and international affairs. Tenenboim and Cohen’s research (2013) focuses on what prompts news consumers to cross the threshold from merely reading a news article to discussing it in the comment section. The conclusion is that there is not necessarily a correlation between highly

viewed articles and articles with the most comments. Similar to what Boczkowski and Mitchelstein (2011) observe, Tenenboim and Cohen (2013, 10) note that news articles dealing with public affairs, specifically politics and government affairs, garner the most comments, while crime – a non-public affair – gains the most views. Thus, news articles with the most views are not necessarily the most commented on and, vice versa, the news articles with the most comments are not necessarily articles that are clicked on the most. Tenenboim and Cohen’s qualitative analysis explains this disconnect by referring to human curiosity; the reader’s interest is piqued by headlines that contain elements of “surprise, death, violence, sex and a prominent figure”, while articles that are commented on include content that is controversial (Tenenboim & Cohen, 2011, 14-15). Thus, the driving force behind commenting becomes airing one’s views on topics that are the target of several differing views.

Research on comment sections also focuses on the demographic of commenters (Artime, 2016; Van Duyn et al., 2021). There is a popular conception that news comment sections are rife with uncivil and even vitriolic messaging and the platform is thus often viewed negatively. Artime’s study (2016, 3) suggest that this is especially true for news dealing with political topics and suggest that such news are prone to being more negative in tone than other mainstream news, which can influence the commentary the news article receives. Another possible reason for hostile commenting lies within the anonymity of the platform; users acknowledge anonymity as the reason for the negative atmosphere of comment sections but would still prefer the platforms to remain anonymous. Negativity also seems to breed further negativity; extremely controversial comments garner the most replies from other commenters, creating a snowball effect of negative comments (Artime, 2016, 3). Moreover, Artime compares data from 2008, 2010 and 2012 to study whether there has been a demographic change in those most likely to comment on news stories. In data from 2008 and 2010, factors such as gender, marital status and employment status had an effect on who commented on a news article; the odds of commenting were increased for those who identified as male, were unmarried or unemployed; the intersections of these groups further increased the chances of commenting. This means that while men are more likely to comment than women, unmarried men are more likely to comment than married men, and unmarried, unemployed men are even more likely to comment (Artime, 2016, 6). Research by Van Duyn et al. (2021) also focuses on this perceived gender gap in comment sections. Their research finds that while women are less likely than men to comment in general, they are

especially likely to not comment on news dealing with political, national and international news, but are more likely to comment on local news. While the hypothesis that this gender gap could be the result of the perceived incivility of the platform was proven untrue, Van Duyn et al. (2021) propose that political socialization wherein women are discouraged from or feel uncomfortable engaging in political debate could be a reason for women being less present in comment sections.

However, data from 2012 suggest that age, race and educational background influence a reader's readiness to comment. The results indicate that younger people are more likely to comment than older people, as are White people more likely to comment than people of other racial backgrounds. A higher education also corresponds with higher likeliness to comment. This change in demographics means that comment sections are increasingly dominated by "wealthy, white, well-educated individuals [...] which can serve to exacerbate the existing hierarchies in American society" (Artime, 2016, 8). The change of demographics also suggests that the previously held notion of commenters being angry and isolated "trolls" does not necessarily hold true. Moreover, Ruiz et al. (2011, 482) observe that the commentary on news articles differs in content depending on the news site and country; some comment sections are described as *communities of debate*, which include diverse argumentation and show a toleration for opinions that are considered to be in the minority, while others are called *homogenous communities*, where comments consist mainly of similar opinions and contain neither differing points of view nor argumentation to that effect. The role of argumentation and debate has been studied by Eronen (2013) from the point of view of moral argumentation as a rhetorical practice. In Eronen's data, discourse on comment sections display four forms of moral argumentation techniques, wherein moral argumentation is used by the community to either reinforce moral norms that are perceived as fixed and unquestioned rules; to negotiate on moral norms by making allowances depending on context; to contribute to the creation of fixed rules by the evaluation people and actions; or, to evaluate people without providing moral reasoning (Eronen, 2013, 295).

Online news comment sections have been chosen as the source of data for the current study because of the interaction of readers with the news article and the topics presented within it. As this study focuses on the evaluation of facemask use, the article chosen for the study relates to

this topic as well. While the content of the article provides a frame for the discussion in the comment section, the comment section is lively and thus provides ample data for the analyzing the attitudes and opinions individuals have regarding facemask use. The following sections cover the data and methodology of this study in further detail.



### **3. Data and Methods**

The following sections present the data collected for this study as well as the methodology employed in the analysis of said data. The data for this study has been collected from the online comment section of a Washington Post news article. Washington Post is a prominent news outlet within United States with global readership as well. This is a qualitative study with some elements of quantification. The methodology involves in-depth qualitative analysis of the language of comments within a single comment thread using the system of attitude provided by the Appraisal theory model. The following two sections are dedicated to presenting the data and methods of the study.

#### **3.1. Data**

The data for this study was collected from the comment section of a Washington Post news article. The article was published on July 27, 2020, under the title “When, why and how to wear a mask during this pandemic, according to the experts” (Amenabar, 2020). The content of the news article outlines the correct ways a facemask should be used, as per the instructions of health care professionals. This article was chosen because, as per its title as well as its content, its primary purpose is to be informative and to provide the readers with useful information regarding the correct use of facemasks. Within the article, there are references to statements made by health experts and health organizations on the use of face masks in public spaces. These statements also include comments on how masks should be positioned correctly. While not including an explicitly inscribed evaluation, the overall content of the article does however strongly imply that masks, when used correctly, are certainly recommended.

The article used for this study has a comment thread consisting of 137 comments in total. Of these 137 comments, 23 were coded as “other”, as they are either bare assertions with no distinguishable evaluative content or they contain evaluation of topics, objects of persons that are not relevant to the topic of facemask use or regulation. The remaining 114 comments include 147 instances of appraisal. The total word count of the comment thread is 7789 words; thus, the average comment is approximately 57 words long and the median is 48 words. The comments contain both initial comments as well as comments responding to them. All comments were transferred to a separate Excel worksheet for manual analysis. All directly identifying markers, such as the display names of the commenters, were removed during preprocessing of the data.

The comments used as examples in the Analysis section have not been altered or edited in any way; the original spellings and grammar have been preserved.

The site allows for comments to be posted for up to two weeks after the article has been initially published, after which the comment section is closed. Comments can be edited or deleted for a short period of time after they have been posted, after which comments that violate the community guidelines are deleted. Deleting takes place as a result of moderation and other users are able to flag violating comments which go against the terms of service; this then places the comment up for moderation.

### **3.2. Methodology**

The current study uses qualitative methods with minor elements of quantification. All comments are manually analyzed through close reading. Categorization and coding are a result of deliberation based on the classifications provided by the Appraisal theory framework; each comment is read closely and analyzed for their expressions of attitude. This is done in the three steps outlined below.

Categorization begins by identifying the target(s) of evaluation in each comment, i.e. the specific aspect(s) of facemask use being evaluated. This first step also establishes the number of evaluative instances within a comment. The second step involves the categories provided by the Appraisal theory model; as the system of attitude includes the subsystems affect, judgement and appreciation, these are the categories the evaluations within each comment are categorized into. Possible bare assertions as well as evaluations of unrelated topics are coded as “other”. The systems of engagement and graduation are not included in the present study.

The last step of the analysis consists of determining the polarity of the evaluation, i.e. whether it displays positive or negative evaluation.. It is important to note that a single comment can contain both multiple targets of appraisal and thus multiple systems of evaluation as well as both negative and positive appraisal of separate targets. Each evaluation is still considered as a separate instance of appraisal, even when it takes place within the same comment. This is why the number of evaluations (n=147) exceeds the number of comments included in the final analysis of this study (n=114).

To ensure that the categorization remains reliable, a second round analysis was conducted at a separate occasion. During this second analysis, a random sample of the data was assessed and categorized once more without the initial annotations from the first round of analysis. 10 per cent of the data was included, which for the size of this data means 15 instances of appraisal (out of 147). By reanalyzing the data, the objective is to ensure that the annotations and categorizations remain stable, justifiable and above all, reliable. This is done because Appraisal analysis can be subjective, which is usually overcome by having two annotators trained in Appraisal theory analyze the data to ensure agreement. As the data for this study has been annotated by only one person, a second round of analysis is a way to ensure agreement and reach reliable results. It is also an efficient method for ensuring that the framework has been applied consistently across the data.

The results of the first and second analysis are compared and the agreement between the annotations is calculated manually. This is done by dividing the number of times the annotation remained the same by the total number of evaluative instances. For the 15 instances included in the second round of analysis, categorization remained the same 12 times and changed 3 times between the two rounds. This leads to a calculation of  $\frac{12}{147} = 0.82$ , in which the quotient expresses the percentages of agreement; the two rounds of annotations are in agreement with each other in approximately 82% of the cases.

## 4. Analysis

Out of the initial 137 comments in the thread, 23 comments have been coded as “other”, leaving 114 comments to be analyzed and coded for their attitudinal content. The comments marked as “other” display some categorizable tendencies as well; they are oftentimes either bare assertions with no distinguishable evaluative content or they are evaluations of people or phenomena that are not relevant to the overarching discussion on facemasks. Bare assertions can occur in the form of either replying to someone’s comment by offering further information or sources of information in the form of links to other sites. The evaluation of unrelated topics is characterized by general dissatisfaction with the persona of President Trump, detached from any of his possible actions or leadership related to the pandemic.

As per the methodology of this study, the first part of analysis entails the establishment of the target categories of the displayed evaluation, i.e. which aspects of facemask use are the target of appraisal. This coincides with determining the polarity of the appraisal. In the 114 comments, 147 instances of appraisal occur, meaning that several comments contain more than one instance of appraisal. Based on the commentary, appraisal is directed at people not wearing masks, people wearing masks, the guidelines regulating facemask use, politics and leadership issues, incorrect facemask use, accessibility of facemasks, self-isolation as a safety measure and the facemasks themselves. The targets and the instances of positive and negative appraisal are listed below in Table 1.

<b>Target of appraisal</b>	<b>Positive appraisal</b>	<b>Negative appraisal</b>	<b>Total</b>
Not wearing masks	0	47	47
Wearing masks	35	0	35
Guidelines	8	19	27
Politics	0	19	19
Incorrect use	0	7	7
Access to masks	1	5	6
Self-isolation	3	0	3
Masks	0	3	3
<b>Total</b>	<b>47</b>	<b>100</b>	<b>147</b>

Table 1. *Targets of appraisal and instances of positive and negative appraisal.*

Negative appraisal is much more prevalent in the data than positive appraisal; negative appraisal occurs 100 times, while positive appraisal occurs 47 times, meaning that negative evaluation is used more than twice as often as positive evaluation. The category with the most instances of appraisal, people not wearing facemasks, displays 47 instances of negative appraisal and no instances of positive appraisal. However, the opposite is true for the category with the second most instances of appraisal, the act of wearing facemasks. Here, the appraisal is exclusively positive, with 35 instances of positive evaluation. These two targets can be seen as different sides of the same coin; the underlying message in both categories is in favor of the use of facemasks, it is only that the means of conveying the message are different. Evaluating the act of not wearing masks negatively is more common than evaluating the act of wearing them positively. Other categories with exclusively negative appraisal are politics insofar as they relate to leadership issues with dealing with the pandemic, the incorrect use of masks and the masks themselves. On the other hand, self-isolation and not going out are appraised exclusively with positive evaluation.

For the category of facemask guidelines, the instances are more varied in polarity, with facemask guidelines and regulations being the target of 8 instances of positive and 19 instances of negative appraisal. When discussing the accessibility of facemask, five instances of negative appraisal and one instance of positive appraisal occur. Notably, not a single target category has more positive appraisal than negative appraisal; the category with the highest frequency of positive appraisal is guidelines (n=8), and even in this category, negative appraisal occurs more than twice as frequently (n=19). There are also four categories with no positive appraisal detected at all (not wearing masks, politics, incorrect use, masks) while there is only one category with no negative appraisal to be detected (wearing masks). This shows that negative appraisal is increasingly more frequent in the data, and that the discourse surrounding the use of facemasks is communicated through negative evaluations. The reasons for this will be explored further in conjunction with the different types of attitude conveyed, as this result should not be taken to mean that facemasks are negatively valued. Table 2 below displays the frequencies of the different attitude types and their polarity.

<b>Attitude</b>	<b>Positive</b>	<b>Negative</b>	<b>Total</b>
JUDGEMENT	16	46	62
AFFECT	23	28	51
APPRECIATION	8	26	34
<b>Total</b>	47	100	<b>147</b>

Table 2. *Types of attitude and their polarity.*

Out of the three attitude systems, judgement occurs most frequently overall (n=62). Judgement also has the highest occurrence of negative instances (n=46), almost triple the number of positive instances (n=16). The attitude system with the second highest number of instances of evaluation is affect (n=51), where the distribution of positive and negative affect is relatively balanced. Positive affect is the most frequent type of positive appraisal overall (n=23), while negative affect is detected slightly more often (n=28). Appreciation is detected 34 times overall, with a distribution of positive and negative appraisal that leans heavily towards negative appreciation (n=26). Negative appreciation occurs more than triple the number of times positive appreciation does (n=8).

The following sections present the analysis of the attitude types separately in conjunction with the targets they are commonly used with in the data.

#### **4.1. JUDGEMENT**

Judgement is the most frequently occurring attitude type overall (n=62), specifically negative judgement (n=47). The majority of negative judgement is aimed towards people not wearing masks, while positive judgement is most often aimed towards people who do wear masks. This is because judgement is more generally aimed towards the character, behavior and conduct of people. The act of wearing or not wearing a mask then becomes the focus of judgement based on either social sanctioning, which sees the use of facemasks as a societal duty and responsibility, or social esteem, which sees the use of facemasks as a sign of capability or tenacity. Going against these societal duties is the object of negative judgement, while fulfilling them is similarly a target of positive judgement. This will be explored further with evidence from the data.

- (1) In general, if you're not wearing a mask in public, you are branding yourself as selfish, inconsiderate, and (take your pick) stupid or evil. I admit that I'm somewhat surprised at how many Americans are incapable of such a minor sacrifice for such a short period of time.

In Example (1), judgement is directed at people who do not wear facemasks in public spaces. The judgement is undoubtedly negative; people who do not wear masks are seen as “selfish, inconsiderate, and [...] stupid or evil”. The comment condemns the conduct and behavior of such people as selfish and inconsiderate, which are generally undesirable traits. This means that the societal duty of propriety is not fulfilled and the commenter resorts to judgement based on social sanctioning. Commenting on the lack of intelligence and perceived evilness of those not wearing masks further emphasizes the perceived lack of capability of those not wearing masks. This type of commentary utilizes social esteem as a source of criticism, i.e. how capable or tenacious those not wearing masks are seen to be. This is similar to commenting on how Americans, in particular, are “incapable of such a minor sacrifice”, which is, again, a judgement of social esteem in terms of capacity, but also social sanctioning in that making sacrifices for the well-being of others is also seen as one’s duty.

The same kind of negative judgement towards people not wearing masks is evident in the following instance:

- (2) They don’t give a rat’s behind about my or my family’s safety and freedom to remain well simply because a mask is “uncomfortable.”

In Example (2), the sentiment is quite similar to that detected in the previous example. By stating that people who do not wear masks do not care about the safety of others, the commenter makes judgements about the character and conduct of such individuals when it comes to being considerate to others. The commenter also makes statements about the reasoning behind such behavior and states that it is done “simply because a mask is ‘uncomfortable’”. The implication here is that this reason is insufficient to compensate for possibly putting the commenter and their family in danger; thus, it similarly brands such people as inconsiderate and selfish. Therefore, Example (2), much like Example (1), contains an instance of judgement based on social sanctioning as well as social esteem insofar as it relates to the incapability of people to deal with being “uncomfortable” for the sake of the well-being of others.

- (3) All these irresponsible people who refuse masks, if they get the virus and seek medical care, will then put medical care people at risk. Hundreds of nurses, doctors, and other care givers have already died, just during the past several months. That is a terrible tragedy for their loved ones. But just on a practical level, what are we to do when there becomes a shortage of doctors and nurses? ALL of us will be in even more trouble, then.

In a similar vein, Example (3) emphasizes the lack of responsibility that characterizes those who do not wear masks. This commenter goes further by extending the judgement of such people by implying that they are to blame for spreading the disease to those in the medical field, leading not only to the suffering of their loved ones, but also possibly to a shortage in medical professionals. Thus, the consequences of the actions of the “irresponsible people” is explored beyond that of branding it as simply selfish or inconsiderate. The judgement involves social sanctioning in that wearing facemasks is, similar to the Examples (1) and (2), implied to be a societal duty that conveys responsibility and attentiveness which, when shirked, leads to further “tragedy” and “trouble” for the rest of the population.

Examples 1-3 display how negative judgement is most commonly exhibited in the data; this includes jabs at those who do not wear facemasks as well as more elaborate and detailed criticism of their behavior. The instances of evaluation can consist of longer stretches of texts, but they can also occur in shorter comments that display an evaluation of someone’s character, such as in Example (4):

(4) I wear a mask because I have to. It’s not about you, you spineless coward.

While shorter in length than the previous comments, this instance of judgement is an example of judgement based on the negative social esteem of those who do not wear masks. The commenter speaks directly to, assumably, someone who does not wear a facemask; the statement that “it is not about you” implies that wearing masks is a process that requires one to step outside of their own wants and needs. The second part of this sentence, however, includes a more direct judgement in the form of insulting such people. Combined, this instance of appraisal implies a lack of capability and tenacity in those who do not wear facemasks, which is the general trend with negative judgement of this target.

Some of the negative judgement is also linked to the target of politics and political leaning. In such evaluations, the act of not wearing facemasks is connected to a specific political ideology or party, which is then negatively judged. This is evident in Example (5):

(5) Unbelievable. Even wearing a mask has become the new culture war with Trumpers refusing to take even the the most basic precaution in mitigating the virus -- wearing a freaking half-once mask. How selfish can you possibly be?



Negative judgement is also aimed towards accessibility of masks, or a specific kind of mask.

This is shown in Example (6):

- (6) There are enough Kn95 masks for the general public. If these there are not adequate make more N95 masks for the market ,If this provides hospital level protection great. If this leads to a shortage then produce more. The attitude herein devalues the human lives of non health care providers indicating that they are worth less than health care providers. This wanton devaluation of human life is characteristic of the west and and I doubt would be stated as such in Asia where human life is more highly valued than in the West.

The judgement in Example (6) displays a displeasure with the accessibility of KN95 facemasks, which is seen as inadequate. Furthermore, the commenter explains and makes judgements on the reasons behind the inaccessibility, implying that is a result of not valuing everyone's life equally. The commenter continues further by labelling the process as "wanton devaluation of human life" and stating that such conduct is "characteristic of the West", which has led to the apparent inaccessibility of masks. The judgement of inadequate access to specific kinds of masks is tied closely with a more general judgement of values and ethical practices, both of which are the target of negative judgement in that they are seen to be against the norms which govern the way life should be valued equally.

Positive judgement, on the other hand, is almost exclusively reserved for the opposite target; people who wear facemasks. Naturally, wearing a mask is appreciated for the opposite reasons as why not wearing them is judged. Wearing a facemask is indicative of either the wearer's social esteem or of them fulfilling their societal duties. Such is the case in the following examples:

- (7) I think of wearing a mask in public akin to the same reasons I drive my car responsibly or vote or don't litter or check on elderly neighbors or make masks for friends -- we're all in this together. We can do this.
- (8) Agreed, don't smoke around children, don't drink and drive, don't go into a hospital or nursing home when you have a cold, don't speed in a school zone, etc. Before COVID these were common responsibilities, and today a mask is more of the same.

In Examples (7) and (8), the commenters view the use of masks as a social responsibility similar to other responsible acts that are accepted as norms and approved of; going against any of these norms is generally frowned upon. The acts listed in the comments, such as driving responsibly or not smoking around children, are also acts that have immediate benefits to others and are indicative of caring and showing consideration for the well-being of other people. Such people

are positively judged for their character and conduct, as following such norms is inherently valued, as is evident in both of the examples. Thus, people who wear masks follow these norms and are therefore positively judged for the same reasons people who do not wear masks are judged negatively for in Examples 1-6; those who do not comply with societal norms are judged negatively while those who do, are evaluated positively.

## 4.2. AFFECT

Out of the three attitude types, affect has the most balanced distribution of positive and negative evaluation. Out of a total of 51 instances of affect, 23 instances were coded as positive affect and 28 as negative affect. One target of negative affect is politics, where evaluation is aimed at political ideology, leadership and specific political figures. Other targets of negative evaluation include people not wearing masks as well as the incorrect use of masks. Positive affect is mostly attached to the wearing of masks; most accounts of commenters describing their daily use of masks is categorized as positive affect, as it underlies a view in which facemasks are perceived as necessary.

Politics as a target of negative affect is often evaluated from the point of view of dissatisfaction, oftentimes in terms of specific political figures, institutions or parties. Often the affect is attached to the influence political ideology is seen to have on the use of facemasks, or how the leadership is lacking. Sentiments of dissatisfaction and anger are thus voiced. The following commenter in Example (9) implies that there is a connection between political ideology and the refusal to wear masks:

- (9) Same is true where I live, near Roseville California, but maybe worse. At our local Winco supermarket, about half of the shoppers don't wear masks, evenly divided between women and men, despite being ruled mandatory, and at least half of the employees don't wear masks, and mingle among the customers while stocking items, making no attempt at social distancing. Our representative in Congress is Tom McClintock, who's mostly a staunch Trump supporter, so maybe the political makeup in my district has something to do with this.

As the refusal to wear masks is, in general, negatively evaluated – evident from how the commenter sees the situation as “maybe worse” – the political leaning responsible for such behavior is then also evaluated negatively. The Congress member being a “staunch Trump supporter” is attached with negative affect, as is the political ideology that is prominent in the

area as a whole, since they both are seen as a possible reasoning behind the residents' tendency to not wear facemasks. A similar sentiment is shown in the following comment:

- (10) I never realized or fully appreciated how much our "leaders" affect what we do (or, in this case, don't) on a day to day basis. It's useless to talk about drumpf and pence but if anyone normal held those offices and wore masks, most people would do the same.

The negative evaluation, in the case of Example (10), is targeted at the political leadership of the time. Similar to Example (9), the commenter makes a connection between leadership and fewer use of facemasks, further attaching negative sentiment by implying that the leadership in question is not normal; if they were “normal”, then more people would use facemasks. The negative sentiment is specifically aimed towards President Trump, here referred to with the mocking nickname “Drumpf” and Vice-President Mike Pence, making a further connection between them and the lack of proper leadership. Furthermore, the commenter uses quotation marks when discussing the leaders in question, making evident that they are questioning their skills as proper leaders. The political leadership is thus seen as a contributing factor to people wearing fewer masks.

While Trump is often a more specific target of evaluation when it comes to the negative evaluation regarding politics, it is oftentimes the case that the negative affect is also targeted at his supporters, as there is a perceived link between not wearing masks and ascribing to conservative and right-wing values. Liberal values, on the other hand, are attached with positive affect insofar as they are seen to correlate with abiding by the rules and regulations of facemask use. In Example (11), the commenter makes comparisons between those who wear masks, and those who do not:

- (11) I've noticed that mask-wearing is completely dependent on the political leanings of a community and the level of education. Shopping last week in a liberal college town of about 100,000, >90% of shoppers wore a mask and did so as recommended by public health officials. None of the patrons wore a red hat. When I got to the next town that's only 15 miles away and is largely agricultural with a population of roughly 6,000, fewer than 10% wore a mask. Many were wearing IQ45 red hats. All the employees were wearing a mask, as it's store policy. [...] MAGAts are stupid, inconsiderate, and likely to be super-spreaders.

The commenter makes the observation that political views have some bearing on the willingness to wear masks; people with liberal values are thought to be more likely to do so, which is evaluated with positive affect and judgement, as this is connected to the view that such people

are following the guidelines set by public health officials. On the other hand, people who the commenter assumes to be conservative, are described as not wearing masks as frequently, a perceived result of their political views as well as an implied lack of education. The latter is communicated through the use of mocking terms such as “IQ45 red hats” and “MAGAts”, while also explicitly labelling them as “stupid.” While making evaluations on someone’s lack of intelligence is also an instance of negative judgement, the comment overall displays examples of positive affect aimed at left-wing politics, while the opposite is true of right-wing politics. Similar comments politicize the matter of mask wearing, creating a dichotomy between those who wear masks – liberal, educated, rule-abiding – and those who do not – Trump supporters who lack intelligence or common sense.

A commonly displayed negative affect is anger and frustration. This is aimed at people who do not wear masks or those who wear them incorrectly; the first is the target of appraisal in Example (12), the latter in Example (13):

- (12) I was shocked at how many patrons were bare-faced, and grew angrier by the minute every time I saw someone not wearing a mask.
- (13) Has anyone noticed all of the people who only wear a mask over their mouth and don't cover their nose? This drives me nuts!

In Example (12), the type of affect is explicitly stated as being anger towards the public not wearing masks. It is thus evident that not wearing masks is evaluated negatively. The same is true for Example (13), where the target is more specific, in that not wearing masks correctly is the object of dissatisfaction and frustration; the commenter identifies wearing the mask in an incomplete manner, i.e. only covering the mouth and not the nose, as the cause for the frustration and negative affect. In such instances of appraisal the commenters clearly state their emotions about a specific target, evident in the use of exclaiming that they “grew angrier” or that the object of appraisal “drives them nuts.” The affect is thus more inscribed as opposed to invoked through implication.

In the data, positive affect occurs in instances where commenters describe their own mask use. Comments where commenters describe their own habits regarding the use of facemasks, in particular those who display readiness to wear them in their daily lives, are consistently coded as positive affect. This is a decision made based on the commenters’ acknowledgement of the

usefulness of facemasks, even when it is not explicitly stated. It is also a testament to the number of commenters who use facemasks regularly, despite the challenges they might identify with their use, such as shortness of breath.

- (14) I always wear one when I go into a place where other people are present or where other people come and go.

In Example (14), the commenter states that they always wear a facemask, in particular when entering public spaces. While it is unclear whether the commenter is doing so for their own protection or to protect others, the implication still stands that the use of facemasks is a measure that is consistently used. Example (14) displays a kind of evaluation that is typical for positive affect of the target of wearing facemasks; commenters often refer to their own mask use, especially as a way to emphasize that they or those in their circle use masks whenever they can. The data also shows that the wearing of masks and the positive affect is often connected to the perception that one is following rules, as in the following example:

- (15) The New York Times surveyed 511 epidemiologists and more than half of them predicted masks will be necessary for at least the next year, if not longer. I'm a liberal voter and pretty much everyone I know is wearing masks outdoors or during short trips to the grocery store or pharmacy.

While instances where users are seen to merely describe their use of facemasks can certainly be seen as bare assertions with no evaluative content, the context of the message can often reveal information which makes the appraisal more evaluative than neutral. By stating that “pretty much everyone I know is wearing a mask” and preceding this by referring to the expert opinions of epidemiologists regarding the necessity of facemasks, positive evaluation is invoked. Example (15) also includes a statement about the political views of the commenter, further implying that there is a connection between liberal leaning and the acceptance of masks as a part of daily protective measures.

Another way in which positive affect is aimed at wearing masks is that of providing fellow commenters with tips and pieces of advice to facilitate the wearing of facemasks and by suggesting different kinds of facemasks to wear. This is consistently coded as positive affect in the analysis, as it is seen as a way for the commenters to promote better and alternative ways to wear facemasks. This is demonstrated in Examples (16) and (17), in which both commenters

respond to a previous commenter's statements regarding the use of facemasks by providing advice:

- (16) Slide your glasses slightly down your nose. Not much, just a quarter to half an inch. Makes all the difference for me in preventing glasses fogging while wearing a mask.

Here, the previous commenter has shared a humorous story about their glasses fogging up when using facemasks. The commenter in Example (16) proceeds to give a piece of advice on how to avoid such a situation. In this analysis, such instances are coded as positive affect on the basis that providing others with information on the use of facemasks is seen as promoting their use, which in and of itself implies a positive sentiment towards facemasks. The same is true for Example (17):

- (17) Try a bandana instead. Coverage nose through neck. Get the big size, 27x27. It's loose around the throat. Plus it's stylish. Carry a piece of hard candy in your pocket, a mint or a butterscotch, that can alleviate the suffocating feeling.

In Example (17), the previous commenter has expressed that wearing disposable facemasks is difficult due to the resulting shortness of breath. Similar to the commenter in Example (16), the commenter is offering advice to alleviate the distress of a previous commenter. Positive appreciation can be seen in expressions such as "it's stylish" or "coverage nose through neck" where evaluations are made of the aesthetic and practical qualities of bandanas; however, positive affect is interpreted as being the general positive attitude towards covering one's face, which is communicated via giving others advice on how to do so. In this case, the commenter is suggesting bandanas as an alternative to disposable masks and continues to list the benefits of them, in addition to providing other pieces of advice on how to overcome breathing problems.

Another target of positive affect is categorized as self-isolation. In such instances, commenters express that they are more likely to stay inside instead of risking possible infection:

- (18) As to restaurants, I'm just not going. I've gotten takeout and that's it.

While there is no inscribed positive evaluation of self-isolation in Example (18), it is still acknowledged that staying away from public spaces is an effective measure, which implies positive affect towards voluntary self-isolation. Such cases could just as easily be categorized from the point of the negative, such as negative affect towards the act of going out, but in cases

where the message is more ambiguous, this is left to the interpretation of the reader. In the following example, the affect is easier to observe and interpret:

- (19) In SW Florida we have fantastic restaurants. Outdoor ones where we can take our dog, the Turtle Club where you can dine on the beach. But we are not going to any of them. Not even our club. Not even take out from our club. Not even on the beach.

The context of Example (19) gives the impression that while there are many opportunities for the commenter to go out and enjoy themselves, they are still opting to stay inside. The reason such instances are coded as positive affect towards self-isolation instead of, for example, negative affect, is that the language reveals much of the evaluation; the evaluation would instantly change if the speaker were to state that they *can't* or *aren't allowed* to go to restaurants. However, the commenter opts to say that they *are not* going, despite ample opportunity. This is indicative of invoked attitude that staying inside is seen as more important than going out.

### 4.3. APPRECIATION

There are 34 counts of appreciation in the data; these are distributed into 26 instances of negative appreciation and 8 counts of positive appreciation. The majority of negative appreciation is aimed towards the guidelines regulating the use of facemasks or the enforcement of guidelines. Guidelines, as a target, are almost exclusively appreciated through the lens of composition, specifically in terms of the coherence and complexity of the guidelines. Guidelines are mostly the target of negative appreciation, as they are seen as inconsistent, ambiguous or irregularly enforced. This is evident in the following, slightly longer comment:

- (20) Had to go to the Tax/Collector/ MVA last week. They "recommend" face masks. The young guys who come in wouldn't be caught being wusses so they sit around maskless waiting for service. The initial front desk contact woman didn't wear a mask but the woman who waited on me did. People, if you go anywhere, go before it opens and wait in your car. I arrived at 9 30 at the Tax Collector / MVA and had to wait 2 hours. Then I had to go to the dentist. Then receptionist didn't wear a mask. Neither did the dentist until he had to lean over me (they do this anyway pre-COVID) Doctors office was different. Sign on door told pts to wear masks and wash our hands in the restroom before entering. Only three allowed in waiting room. I signed in and waited in the hall. Doc, nurse, everyone wore masks. Vet has us wait in the car and then staff, geared up, comes out and gets dog, calls us with exam results as we wait. Weird Florida. No rules to follow, everyone makes own rules, governor only worries about economy and staying on trumps good side.

There are several targets of appraisal in Example (20), as well as several types of appraisal. There is negative judgement of “young guys” not wearing masks, positive judgement of establishments where facemasks are consistently enforced, as well as negative judgement of the political establishment for only being concerned about the economy. The evaluation of guidelines surrounding facemask use is negative as they are deemed lacking due to being unclear and inconsistently enforced. The commenter lists the different locations they have visited recently, observing that there are no consistent sets of rules that all public establishments follow. Furthermore, if such recommendations do exist, they are not necessarily always enforced. The commenter summarizes their evaluation by stating that there are “no rules to follow, everyone makes own rules”, making explicit their view on the guidelines as being inconsistent and unclear.

Another commenter makes similar observations and evaluations in Example (21):

- (21) My doctor's office on May 9th-no gloves nor masks at front desk. Tech who drew blood: both. Nurse practioner: gloves only. She claims staff are tested daily. Gave me a lecture about me wearing gloves and mask. I told her I didn't see any wiping down of waiting room. Crickets. My skin doctor(recovering from Stage 1 melanoma): must wear mask, prescreened before entering office. What a difference and we are talking MEDICAL OFFICES! Worse place(customers) Home Depot The staff all wear masks and gloves but Billy Bob and Karen, lean over you while shopping.

The above comment displays some of the same evaluations as Example (20). There are, again, multiple separate instances of appraisal and targets of appraisal observable. There is a negative connotation to the statement of “lecturing” someone regarding the use of protective measures. The instance of negative appreciation focused on in this example is similarly targeting inconsistent guidelines, this time in establishments that both provide medical aid. The attitude is less overtly negative, but the commenter nevertheless makes it known that there are no clear guidelines when it comes to the use of facemasks, both between different medical offices and even within the same office, as evidenced by the practices of the different medical personnel the commenter interacted with during their visit. The same can be said to apply to the instances involving the hardware store Home Depot, where masks are used only by the staff but not by the customers. There is negative evaluation of customers who do not wear protective measures while shopping in close proximity to others. It is unclear whether Home Depot has issued any mask recommendations or guidelines for their customers, in which case not using facemasks counts as



ignoring the set guidelines, or whether guidelines for customers simply did not exist at the time. In either case, the lack of clear guidelines has resulted in inconsistent mask use.

Another topic that is regularly discussed is the guidelines regarding the use of masks while outside. This is also often the target of negative appreciation, as a lack of consistency is expressed throughout the comments:

- (22) If wearing a mask is to protect others, and you are outside but not within 30 feet of anyone - then why wear a mask? And for Pete's sake, why wear a mask in your car? And again, why is okay to go out and demonstrate with hundreds of thousands of people packed closely together - some not wearing a mask (according to over a thousand Public Health "experts" who signed a letter stating the demonstrations were okay) - but not okay to not wear a mask when you are walking outside all by yourself? The advice on mask wearing is very inconsistent and changing all the time - and much of the advice really doesn't make sense.

In Example (22), the commenter first questions practices that are deemed unnecessary, such as having to wear a facemask when one is not in close enough proximity to spread the virus, or when one is completely isolated, such as inside a car. This is seen as contradictory to the act of large masses of people gathering for a protest, in this case the Black Lives Matter protests that began in June of 2020. As a whole, the practice of having inconsistent and constantly changing guidelines is evaluated negatively. The commenter concludes the statement by expressing that advice surrounding mask use does not make sense, demonstrating a negative appreciation of the composition and coherence of the given rules.

Example (23) has a similar evaluative content, in that the guidelines of mask use outside are seen as contradictory:

- (23) Here in SF, when outdoors and within 30 feet of another you are mandated to wear a mask, yet outdoor diners can sit 6' apart with no mask. There's no sense to it. Either it's 30' and no dining period or it's ok to be within 6' of another without a mask.

In Example (23), the use of masks outside while far from others is seen as non-sensical when compared to the allowances given for outside dining, which is allowed despite diners being in much closer proximity to each other. The commenter then suggests that in order for the guidelines to be clear and consistent, either dining should be prohibited similar to other outings or being six feet from others should be allowed regardless of the kind of activity one is engaging in. To answer the question of how the guidelines regarding the use of facemasks outside are

evaluated, the commenters' evaluations are consistently negative in nature in this regard. The sentiment of such comments can be summed up into a single question:

(24) But why should anyone wear a mask outside when certain groups don't have to is my question?

In the case of Example (24), it is evident that having different rules for different people and contexts makes the commenter view the composition of the guidelines as confusing. The guidelines lose their credibility when they are not followed by everyone, hence the question of whether anyone is obligated to wear facemasks when others are allowed not to, becomes relevant and questions the credibility of the guidelines.

Negative appreciation is also directed towards the masks themselves. The evaluation of facemasks as concrete objects is not very common in the data; it occurs only three times, all in conjunction with negative attitude, specifically negative appreciation. This evaluation is expressed in conjunction with stating that the commenter wears masks regularly; however, the masks themselves can pose difficulties for the wearer, as is expressed in the following example:

(25) I wear my mask when I am physically in the store. When I leave the store if the entrance and way to the car is not crowded, the mask comes off. I don't drive with a mask on either. The mask (regular pleated disposable) is hard for me to breath through. I get hot and nauseous after about 20 minutes. I try to keep grocery shopping to short visits.

As is noted in Example (25), the commenter explains their own facemask use, followed by expressing an evaluation of facemasks as objects. The commenter states that masks are difficult to breathe with, which affects their well-being when worn for longer periods of time. Other comments targeting facemasks display the same tendency; the negative appreciation co-occurs with statements of how the commenter wears a facemasks despite the associated difficulties. The combined effect of such evaluations is that facemasks are seen as a kind of necessary evil.

Positive appreciation, on the other hand, does not occur as often as negative appreciation. The target of positive appreciation varies from guidelines to the masks themselves; the former occurs in instances where explanations are given for the guidelines in an attempt to clarify them, while the latter can occur in instances where aspects of the masks are evaluated based on how necessary and worthwhile they are.

Providing explanations for guidelines often coincided with previous commenters questioning the credibility and coherence of the guidelines. This is demonstrated in the following example:

- (26) Here is a way to reconcile the different rules: What we are trying to do is minimize risk as best as we reasonably can. If you need to eat at a restaurant with friends, we allow that, and dining is incompatible with utilizing a mask. And yes, allowing that creates more than a modicum of risk. But we can prevent compounding that risk by insisting on masks in most other public spaces.

In Example (26), the commenter is responding to a previous, negative evaluation of guidelines. The commenter is attempting to explain the inconsistencies of the guidelines by providing reasons for why they are constructed as they are. The commenter acknowledges that certain parts of the rules can lead to risks of being infected, but the overall sentiment regarding the guidelines is positive, insofar as they are still seen to be an attempt to “minimize the risk as best as we reasonably can.” Viewed from this angle, the guidelines are seen as less unreasonable. Such is also the case in Example (27):

- (27) it is not an either or. I read something that makes sense, it is your cumulative exposure that increases the odds, so everything that you do either increases or decreases the odds.

In Example (27), a commenter is again responding to a previous negative appreciation by attempting to reason why the guidelines do, in fact, make sense. The initial idea of the previous commenter is that it is counterproductive to allow dining in close proximity to others while insisting on facemasks in places where the distance is far greater; the commenter in Example (27) then expresses that the guidelines should be viewed from the angle of cumulative exposure, in which case insisting on the wearing of facemasks is seen as a positive act of reinforcing guidelines. By explicitly stating that this guideline “makes sense”, the commenter is providing an inscribed evaluation of the clarity of the guidelines, which are otherwise seen as unclear by the majority of the commenters in the data.

Lastly, appreciation can also be given to facemasks themselves as physical objects:

- (28) One sneeze or cough can provide enough infectious material to infect several people. That is why the mask is protective for the others. At the same time, a mask can capture infectious material expelled by others.

In this case, the target of appraisal is the facemask itself in relation to its ability to protect others from infection. The evaluation is based on the ability of facemasks to stop the virus from making

contact with the spaces they cover, which is an assertion regarding the physical properties of facemasks. The evaluation is positive as it is related to the protective characteristics of the mask; the commenter's evaluations point out that through the wearing of masks, wearers can both protect others as well as oneself. Because the evaluation is analyzed as targeting facemasks as an object, such comments are categorized as expressing appreciation, which is the form of attitude most concerned with the physical and aesthetic qualities of objects and artefacts.

## 5. Discussion

The analysis of the data yields results that point to the frequent use of negative evaluation in the discourse surrounding the use of facemasks. Negative appraisal is used consistently more often across all systems of attitude: affect, judgement and appreciation. In the case of judgement, negative evaluation occurs almost three times as often; with appreciation, the same occurs more than three times as frequently. However, this is not taken to mean that facemasks are evaluated with negative polarity, and this is determined through examining the targets of both negative and positive appraisal, through which it can be indicated which specific aspects and actions regarding the use of facemasks are evaluated.

The data shows that there are several different aspects of facemask use that are regularly evaluated. The most common combination of attitude and target is that of judgement aimed towards people who do not wear masks, which is a category that is exclusively evaluated in negative terms. The evaluation most commonly relies on the use of social sanctioning against those in the population who are seen as irresponsible and selfish by putting other people at risk, which constitutes as not fulfilling one's societal duty. When viewed from this angle, the wearing of facemasks is seen as a societal duty which, when broken, sets one up for negative judgement. Even in the few cases where negative appreciation occurs when targeting facemasks, it is only done when expressing the issues people have when wearing masks, such as breathing problems. Even in such contexts, commenters often express that they are still using masks despite the associated difficulties, leading to an interpretation that the wearing of facemasks is seen as a necessary discomfort.

In the same vein, there is an expressed need for more clear and unambiguous guidelines regarding the use of facemasks. Commenters express negative evaluations in the form of negative appreciation when discussing the inconsistency of the rules that regulate facemask use, calling for guidelines that are clearly stated but also consistently and regularly enforced. There is an intolerance for those who do not regularly enforce rules, and only a few cases where the guidelines are seen to be uncomplex and thus the target of positive appreciation. Similarly, the sentiment of lacking guidelines is often connected to negative evaluations of political establishments, ideologies and even specific political figures, who are seen as either lacking in

leadership skills or as causes behind the low use of facemasks in certain areas or within certain demographics. Evaluation can resort to the use of insults and evaluations of the intelligence of those who do not wear masks, especially if this is seen as being dependent on political ideologies. The negative evaluations of those who do not wear facemasks – which often align with the negative evaluations of right-leaning individuals – and the positive evaluations of those who do wear masks further emphasize the dichotomy between partisan lines.

The need for more clear guidelines and the criticism aimed at political parties and figures also support the thesis that facemasks are valued: there is criticism of unclarity, which calls for clarity, just as there is criticism of inaction, which calls for leading with example. The fact that the criticism is aimed towards right-wing establishments is further testament to the bipartisan nature of facemask discourse; the topic is framed in a way that facemask use is tied with liberal politics, while the refusal to do so is seen as being connected to conservative values. In this vein, the issue is framed as Republicans versus Democrats; or, more specifically, as Trump supporters versus everybody else. Former President Donald Trump's role in containing the pandemic is seen as either not efficient enough or as exacerbating the situation. Furthermore, the use of facemasks is also seen as a sign of intelligence, where abiding by the facemask regulations is viewed not only as abiding by the rules, but also as a characteristic of an educated and intelligent person with an understanding of scientific facts. If not explicitly inscribed in the text, then there is at least an invoked negative attitude aimed towards those whose political ideology does not align with one's own views, and this attitude has certainly bled into discourse regarding facemask use and the overall behavior of people during the pandemic. In a country such as the United States, where the two-party system often splits the nation into two when it comes to many political questions, this chasm is reflected in the way people regard one another and each other's actions.

From the point of view of infodemiology, the results of this study can be seen as both positive and negative. If the focus is to be on how seriously the public takes the current pandemic, then the results indicate that for the vast majority of the commenters in the data, facemasks are in daily use and their efficiency in stopping the spread of COVID-19 is acknowledged. This manifests itself in the way wearing facemasks is an act that is, if not applauded, then at least expected, while not wearing one is condemned. Referring to scientific fact in one's appraisal might be present in only a minority of the cases, but the question has

shifted from arguing about scientific fact to arguing over the morality of wearing facemasks and the way a community should behave during a shared crisis. The science of facemasks is not thus debated, as it is already a given; appraising the public's behavior in light of scientific evidence is, however, a topic of heavy debate. The way in which these results could be viewed as negative from the point of view of infodemiology relate to the more specific ways safety information has been communicated to the public. When there is doubt or confusion over the irregularity of rules, this is not necessarily a reflection of a disconnect between scientific information and the public's understanding of it, but rather a valid criticism of the way the information has not translated into clear and concise guidelines.

Similar research on the discourse surrounding various aspects of the COVID-19 pandemic are undoubtedly being conducted and will be conducted in the future. Such studies can give invaluable insight into the perceptions, attitudes and beliefs the public has in times of shared crisis. The results of the current study show positive results regarding the public's readiness to adapt to the inclusion of protective measures such as facemasks into their daily life. From the point of view of public health officials and health organizations, who work to emphasize the importance of such protective measures, such results are promising and show the extent to which the public is abiding by the set guidelines. However, as the data in this study shows, there is much to be improved upon when it comes to the way health information is explained and rationalized by health officials, as confusing and unclear regulations and communication is increasingly met with negative attitude. There is an expressed need for clear and consistent regulation and the enforcement of said regulation – when this need is not met, the public's response becomes increasingly negative in nature. This also reflects on the evaluations that are made of other public officials as well, from medical offices and health providers to the political institutions.

Studying the online discourse throughout the COVID-19 pandemic can provide valuable insight into the public's response. Further research can look into the specific response to different consequences of the pandemic, such as the language and evaluations used in contexts where the use of facemasks is rejected to study the underlying reasons for such decisions. The data used in the current study is overwhelmingly in support of the use of facemasks and this is conveyed in a variety of ways which emphasize the importance of protective measures; linguistic

research that delves into the possible reasons behind rejecting protective wear can extend the study further to include more opposing views. Alternatively, research can look into other aspects of the pandemic discussed on various online platforms; the decision to focus on facemasks in this study was made in order to narrow down the focus of the research into a topic that has many faces and manifestations in everyday discourse, both online and offline. Linguistic research is already making strides in studying the different themes and topics of discussion in online platforms, such as Twitter. Such studies provide an important overview of the various different topics of discussion and a deeper look into the individual topics can shed light on the ways in which COVID-19 has affected the everyday life of the public and, consequently, how the public communicates the ways in which they are dealing with the situation.



## 6. Conclusion

The current study explores the various evaluations the public make regarding the use of facemasks during the COVID-19 pandemic. The results, as far as polarity goes, show that facemasks are evaluated positively in the vast majority of the cases. By using Appraisal theory as its primary framework, the root of such attitudinal evaluations could be explored even further. As the analysis shows, the attitudes and concerns of the commenters are not expressed simply through positive evaluations of the phenomena they are in support of or the negative evaluations of the issues they are against. Rather, sometimes the negative judgement of someone's behavior is a call for different kind of conduct. If one criticizes people for not wearing facemasks, the polarity of the appraisal is negative, but the bearing this message has on facemask use is positive. Through the use of Appraisal theory, the parallel meanings of such messages could be explored to their full extent. For the data such as the one used for this study, Appraisal theory proves an efficient method through which not only can evaluation be explored further, but it also opens up further questions regarding choice in producing language. For the current study, negative attitude – and especially negative judgement – are quite represented in the data. From the point of view of choice, this negativity is an interesting finding as the reasons behind it can be various; is it merely a result of the sense of anonymity afforded to users of social media, the danger and fear that the pandemic represents, or a more deep-rooted sense of us versus them mentality? The data certainly frames the issue of wearing masks as a moral one, but it is likely that the tone of the conversation is influenced by the medium where it is uttered.

Adopting Appraisal theory for this line of research thus produces salient results as it is an efficient tool in delving deeper into evaluations than merely polarity. The systems, while explained in great detail by Martin and White (2007), do however leave some questions up to interpretation. Appraisal theory presents a method of analysis which requires much decision-making on the part of the researcher when it comes to determining which attitude system any given utterance or text is categorized as. Martin and White's (2007) outline provides a comprehensive method for this; however, much of attitudinal evaluations are not explicitly coded, but rather implied through various linguistic cues. Such subtleness in meaning could potentially be difficult to identify if not considered in greater detail; furthermore, the categorization of such subtle invocations must also be justifiable. In such cases, qualitative

analysis becomes important in determining the underlying meanings a speaker chooses to convey.

This study was planned in the beginning of the pandemic in March of 2020 and, as such, its data was collected in the Summer of 2020. Since then, the pandemic has evolved and changed shape; there is new scientific information available, as well as a vaccine by multiple pharmaceutical companies. These developments surely affect the discourse surrounding COVID-19 and the various protective measures involved. This study thus provides a snapshot of evaluations and attitudes from a very specific period of time. Hypothetically, a similar study might yield slightly different results if done towards the end of the year 2020, or now in 2021, as we are entering the second year of the pandemic. It is difficult to determine what the results might be; is the public even more persistent in their effort to stop the spreading of the virus via using protective measures, or is there indication of the public becoming more lax with the regulations? A study of evaluations from different time periods can shed more light on the ways in which attitudes change, even within such a short timeframe.

Lastly, an important consideration is that of representability. This study has been conducted while remembering that all corpora is a sample of language and cannot be taken as entirely representative of an entire population. While sometimes stated explicitly and other times heavily implied, some of the commenters stated their political leaning as liberal or left-wing, which has implications on the representativeness of the data. This can also be the result of the source of the data. According to a survey conducted by the Pew Research Center in 2014 regarding the ideological composition of various US news and media outlets, Washington Post is among those outlets whose readership is made up of more consistently liberal readers rather than conservative readers. The same study shows that Washington Post is the target of more distrust than trust amongst both mostly conservative and consistently conservative audience members, while it is trusted by consistently liberal and mostly liberal readers as well as readers with mixed ideological views (Mitchell et al., 2014). What this implies for the current study is that the readership of the site from which this data is taken consists of liberal readers, meaning that the commenters on such sites are likely also liberal-leaning and thus do not in all cases represent the entire public and their attitudes and opinions. With further research into the attitudes conveyed by various different demographics, a more all-encompassing view can be provided.

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