

THE MISMATCH BETWEEN GREEN WORDS AND ACTIONS

**A STUDY ON PSEUDO-PROFOUND BULLSHIT IN BUSINESS
COMMUNICATION ABOUT SUSTAINABILITY**

JULIA SANDBLOM

VERA STRÖMBÄCK

Bachelor Thesis

Stockholm School of Economics

2021



The Mismatch Between Green Words and Actions: A Study on Pseudo-profound Bullshit in Business Communication about Sustainability

Abstract:

The increased access to information as a result of digitalization has made it easier to share valuable knowledge. However, simultaneously it has also facilitated the spread of misleading concepts such as fake news and greenwashing. Due to increased consumer demand for companies to take action within sustainability, there is no shortage of words promising such action. Companies may frame themselves as being sustainable through statements with little concern for the truth. Such communication can be categorized as pseudo-profound bullshit, which is defined by its vagueness, hiding the fact that it lacks meaning. This thesis aims to understand further what contributes to the phenomenon of pseudo-profound bullshit being accepted and going undetected. Through a quantitative study, the authors investigate how the human and situational factors, cognitive ability, cynicism, skepticism, and perceived knowledge influence individuals' receptivity to pseudo-profound bullshit related to sustainability in business communication. The results showed no significant differences in receptivity towards pseudo-profound bullshit statements compared to real statements. However, it was found that cognitive ability and skepticism exhibits a tendency to affect differences in bullshit receptivity.

Keywords:

Pseudo-profound bullshit, Bullshit receptivity, Consumer skepticism, Sustainability statements, Business communication

Authors:

Julia Sandblom (24468)

Vera Strömbäck (24322)

Tutor:

Patric Andersson, Associate Professor, Department of Marketing and Strategy

Examiner:

Gustav Almqvist, Department of Marketing and Strategy

Bachelor Thesis

Bachelor Program in Business and Economics

Stockholm School of Economics

© Julia Sandblom and Vera Strömbäck, 2021

A special thanks to:

Patric Andersson for your inspiration and support, your incredible advice and guidance.

To all respondents, for your valuable contribution.

To Friends and Family, for always believing in us and being supportive.

Contents

1.	INTRODUCTION	6
1.1	Background	6
1.1.1	History of bullshit.....	6
1.1.2	Fake news	7
1.1.3	Business communication in the industry of consumer goods	7
1.1.4	Greenwashing	7
1.2	Problem area and research gap	8
1.3	Purpose and research questions	8
1.4	Intended knowledge contribution	9
1.5	Delimitations	9
2.	THEORETICAL FRAMEWORK	10
2.1	Pseudo-profound bullshit.....	10
2.1.1.	Bullshit receptivity	11
2.2.	Human factors	12
2.2.1.	Cognitive ability	12
2.2.2.	Cynicism.....	13
2.3.	Situational factors.....	13
2.3.1.	Skepticism	13
2.3.2.	Perceived knowledge.....	15
2.4.	Hypothesis development	15
3.	METHODOLOGY	17
3.1.	Scientific approach	17
3.2.	Questionnaire design	17
3.2.1.	Questionnaire.....	17
3.3.	Scales and variables.....	19
3.3.1.	Context	19
3.3.2.	Receptivity.....	19
3.3.3.	Profundity	21
3.3.4.	Skepticism	21
3.3.5.	Perceived knowledge.....	21
3.3.6.	Cynicism.....	22
3.3.7.	Cognitive Ability	22
3.4.	Insights from preparatory study	22

3.5.	Data collection and analysis.....	22
3.5.1.	Data collection.....	22
3.5.2.	Drop-out analysis	23
3.5.3.	Data analysis.....	24
3.6.	Reliability and validity	24
3.6.1.	Reliability	24
3.6.2.	Validity	24
3.7.	Quality of survey data	25
4.	RESULTS.....	26
4.1.	Analytical tool	26
4.2.	Bullshit receptivity and real receptivity	26
4.3.	Context	28
4.4.	Human factors	29
4.4.1.	Cognitive ability	29
4.4.2.	Cynicism.....	31
4.5.	Situational factors.....	32
4.5.1.	Skepticism	32
4.5.2.	Perceived knowledge.....	33
4.6.	Pearson's correlation test	34
4.7.	Linear regression analysis	34
4.8.	Hypothesis summary	36
4.9.	Additional findings	36
5.	DISCUSSION.....	38
5.1.	Conclusions and implications	38
5.1.1.	Pseudo-profound bullshit receptivity	38
5.1.2.	Impacts of human factors	39
5.1.3.	Impacts of situational factors	40
5.2.	Summary of key findings	40
5.3.	Limitations and suggestions for future research	41
6.	REFERENCES	43
7.	APPENDICES	46
7.1.	Appendix A	46
7.2.	Appendix B.....	52

Definitions

Bullshit: something that lacks concern for the truth and aims to deceive and impress others (Frankfurt, 2005).

Bullshit receptivity: lacking the ability to detect and distinguish bullshit from non-bullshit, as well as being unable to identify the need for skepticism (Pennycook et al., 2015).

Cynicism: an enduring disbelief of others that occurs when people are seen as acting solely based on selfish motives (Anson, Mann and Sherman, 1986).

Greenwashing: making unfounded or exaggerated claims of sustainability or environmental friendliness in an attempt to gain market share (Dahl, 2010).

Lying: a statement constructed with concern for the truth, made by someone who believes they know the truth but tells the opposite (Frankfurt, 2005).

Pseudo-profound bullshit: a subcategory of bullshit. Statements constructed to give the recipient some sense of profundity at the expense of a clear meaning or truth (Pennycook. et al., 2015).

Profundity: describes deep meaning (Pennycook et al., 2015).

Skepticism: doubting what others are saying or doing but possibly being convinced by evidence or proof. Cognitive response which varies depending on the context and content of the communication (Mohr, Eroglu & Ellen, 1998).

Sustainability statements: in the context of business communication, sustainable statements aim to represent claims made by companies used to describe their sustainable operations.

The Cognitive Reflection Test (CRT): tests the ability or disposition to reflect on a question and resist reporting the first response that comes to mind. Used to measure one type of cognitive ability (Frederick, 2005).

1. Introduction

During an era of fake news and conspiracy theories, bullshit is an unavoidable and growing topic that has not yet been extensively discussed. Fifteen years ago, bullshit was determined to be one of the most salient features of the modern time (Frankfurt, 2005). Nowadays, with increased accessibility to news and information, nothing would suggest that it has become less salient. In order to stand out in a public landscape filled with deception and questionable information, companies need to be transparent. The topic of sustainability is one area where such transparency is particularly important since the growing concern for climate change among consumers has given rise to the concept of greenwashing (Dahl, 2010). To meet the demand for sustainable action, companies may use claims, promises and statements to communicate their green vision. However, sometimes there is a mismatch between words and actions.

1.1 Background

1.1.1 History of bullshit

Nonsense and bullshit are for some people different words for the same thing. To state the difference between the two concepts, consider the following sentences created with impressive buzzwords; a) "Unparalleled transforms meaning beauty hidden abstract." This first sentence does not make sense; in other words, it is nonsense. In comparison, see b) "Hidden meaning transforms unparalleled abstract beauty." created with the same buzzwords but constructed to communicate something which makes it bullshit (Pennycook et al., 2015). The above example (b) might not be what comes to mind for most people when discussing bullshit, a more familiar version of bullshit would be an exaggerated story told over drinks (Pennycook et al., 2015).

According to Frankfurt (2005), bullshit is also “hot air”, which describes the only thing that comes from the speaker’s mouth, where the words are put together with indifference towards the truth. Some people might argue that this is equivalent to lying or bluffing. While lying is based on the intention of concealing the truth, implying that the truth is of concern, bullshit is created without such a concern. Essentially, the bullshitter does not care about whether the information conveyed is true or not (Pennycook & Rand, 2019).

Frankfurt, (2005) was later followed by Pennycook et al. (2015), adding an additional dimension to the concept of bullshit, called pseudo-profound bullshit. In contrast to mere bullshit, pseudo-profound bullshit is characterized by its vagueness, which hides the fact that it lacks meaning. Bullshit is easy to call out, whilst pseudo-profound bullshit is not as easy to identify.

1.1.2 Fake news

Today's society is overflowing with information due to increased accessibility and digitalization. In line with the increased use of social media, the sharing of information and news has escalated, contributing to an unfiltered news landscape. Falsehood is shared and diffused faster than the truth which has given fake news a head start (Vosoughi, Roy & Aral, 2018), something that was evident in the Presidential Election in 2016 when it became a significant subject discussed in the media (Pennycook & Rand, 2019). In the realm of lying and bullshit, fake news falls under the latter when following Frankfurt's (2005) definition. The correlation between perceived accuracy of fake news and receptivity to pseudo-profound bullshit was found in a study by Pennycook and Rand (2019).

1.1.3 Business communication in the industry of consumer goods

Nowadays, consumers consider companies' sustainable work to be increasingly important. During the year 2019, companies within the sector of consumer goods experienced a rise from 53% to 61% in consumer interest for environmental issues (Swedish Trade Federation, 2019). The consumer demand for sustainable goods puts pressure on industries to adapt to changed expectations. To meet this increased demand, companies have to communicate their environmental actions, in order to be categorized as sustainable brands. According to Suchman (1995), only the absence of sustainable communication and claims, reveals a non-environmental way of operating. This means that companies may gain trust through phony based claims, as long as they are impressive and use meaningful concepts, which is in line with the aforementioned definition of pseudo-profound bullshit (Pennycook et al., 2015).

1.1.4 Greenwashing

Due to the increased need for businesses to frame themselves as sustainable, the concept of greenwashing has grown in business communication. The term greenwashing describes unfounded or exaggerated claims regarding sustainability (Dahl, 2010). Greenwashing is closely related to bullshit in the sense that it does not aim to tell a lie but rather relies on noble promises that seldom come to fruition. Regarding bullshit in global climate governance, the detection of it can be seen as a double-edged sword. When remaining undetected, it hinders the efforts to mitigate climate change and when it does come to light, it threatens to harm the public trust in political institutions (Stevenson, 2021).

1.2 Problem area and research gap

As previously mentioned, bullshit is a salient feature of our modern time, together with a growing interest in sustainability and consumer demand for climate action. In an effort to satisfy these demands, companies and governments announce declarations, claims or pledges promising ambitious emissions reduction. Yet, pollution continues to increase, and the actions do not meet the ambition needed to ensure a stable climate. Words are rarely supported by sincere ambition and action, resulting in a mismatch between rhetoric and actions (Stevenson, 2021). The lack of sincerity while trying to communicate *something* impressive and profound indicates that such communication may be pseudo-profound bullshit (Pennycook et al., 2015).

The concept of pseudo-profound bullshit will be put in the context of business statements made to describe a company's actions within sustainability. The study will investigate which factors influence individuals' perception, and in particular, individuals' receptivity to such sustainability statements. This thesis will attempt to contribute to the research area of pseudo-profound bullshit by connecting business statements, sustainability, and several factors affecting bullshit receptivity that have not been previously investigated. Additionally, the authors aim to demonstrate the importance of noticing false statements and being critical towards companies' communication within sustainability.

1.3 Purpose and research questions

The purpose of this study is to investigate which factors influence individuals' receptivity to pseudo-profound bullshit statements regarding sustainability in business communication. To examine these factors, we firstly aim to establish if individuals are receptive to pseudo-profound bullshit in the aforementioned context. Therefore, we pose the following research question:

- 1) *Are individuals receptive to pseudo-profound bullshit regarding sustainability in business communication?*

Two categories of driving characteristics have been selected in an effort to understand which factors influence individuals' receptivity to pseudo-profound bullshit: 1) Human factors, measured by the level of cynicism and cognitive ability, are inherent traits that are consistent across contexts. 2) Situational factors, measured by the level of skepticism and perceived knowledge, vary depending on the context. Thus, we pose the second research question, which aims to investigate how human and situational factors influence receptivity to pseudo-profound bullshit:

- 2) *To what extent do human and situational factors respectively influence individuals' receptivity to bullshit related to sustainability in business communication?*

1.4 Intended knowledge contribution

Previous studies have touched upon pseudo-profound bullshit in the context of public speaking and politics (Pfattheicher & Schindler, 2016), in organizations (Christensen et al., 2019), and what characterizes who falls for fake news and pseudo-profound bullshit (Pennycook. et.al, 2015; De Neys, 2014; Pennycook, Fugelsang and Koehler, 2015). This study aims to contribute to the knowledge concerning pseudo-profound bullshit by applying the phenomenon to the context of sustainability in business communication. Furthermore, the study seeks to expand the previous research on pseudo-profound bullshit by exploring additional factors influencing receptivity.

1.5 Delimitations

This thesis investigates how cognitive ability, cynicism, skepticism and perceived knowledge influence an individual's receptivity to pseudo-profound bullshit statements. There are indeed several additional factors that influence individuals' receptivity to pseudo-profound bullshit, which this thesis has not investigated. For instance, only limited information about the industry (i.e., consumer goods) and the context was given to respondents, but additional information about the companies (company name, products etc.) was not provided. The authors have chosen to limit the investigation to the four aforementioned individual factors due to the ambition of drawing conclusions regarding consumers as a group, independent of previous company specific knowledge and sentiment. Due to limited resources the online questionnaire was only distributed to Swedish consumers.

2. Theoretical framework

In order to address the research questions, this section will present the theoretical framework which is based on previous research and literature on the respective topics. Generated hypotheses will be presented accordingly and summarized at the end of the section.

2.1 Pseudo-profound bullshit

Pseudo-profound bullshit lacks clear meaning and is designed to impress rather than to inform, and to be engaging rather than instructive (Pennycook et al., 2015). The word pseudo-profound, in a literal sense, means pretending to be deep or meaningful. As mentioned in the introduction, the sentence b) "Hidden meaning transforms unparalleled abstract beauty" is an example of bullshit. To clarify the difference between bullshit and pseudo-profound bullshit, consider the following sentence c) "Attention and intention are the mechanics of manifestation". This is a real-world example of pseudo-profound bullshit published as a tweet by New York Times best-selling author Deepak Chopra, M.D. This is not a random collection of buzzwords, however its vagueness suggests that it was constructed to seem profound at the expense of a clear meaning or truth (Pennycook et al., 2015).

According to Dalton (2016), bullshit, randomly generated by a computer, might be difficult to value in terms of how profound it seems. Dalton (2016) argues that bullshit, like beauty, may be in the eye of the beholder and disagrees with the definition by Pennycook et al. (2015) which states that bullshit "lacks clear meaning from the perspective of natural science". He argues that people with a higher ability to accept paradoxes might find as much meaning and profundity in the truth as in randomly generated bullshit statements (Dalton, 2016). However, Pennycook et al. (2016) stress that bullshit is defined in terms of how it is produced and not by how it is perceived. Following the definition offered by Frankfurt (2005) bullshit depends on the intentions, or lack thereof, by the person communicating the statements, which means that profound bullshit is still bullshit (Pennycook et al., 2016).

Previous research on bullshit often refers to Frankfurt (2005) which was the first study made in the field, and Pennycook et al. (2015) as the first research made on pseudo-profound bullshit. Therefore, it can be argued that the theoretical framework may stem from a narrow perspective. However, several replications and studies built on this research have been made, focusing on different contexts and potential reasons behind the concept (De Neys, 2014; Pennycook, Fugelsang and Koehler, 2015; Pfattheicher, Schindler, 2016; Petrocelli, 2018).

2.1.1. Bullshit receptivity

Being receptive towards pseudo-profound bullshit, and bullshit in general, means lacking the ability to detect and distinguish bullshit from non-bullshit, as well as being unable to identify the need for skepticism (Pennycook et al., 2015). Two main factors describing why some people rate pseudo-profound bullshit as profound, and hence are receptive to bullshit, are discussed by Pennycook et al. (2015). The first mechanism is the inability to resist the biological human bias towards believing something said as true, due to lack of additional processing (Pennycook et al., 2015). Similarly, Stanovich (2018), argues that humans often limit the processing and critical thinking towards information and impressions, due to the natural human bias. According to De Neys (2014) the aforementioned human bias is caused by, and is contingent, on task and personal characteristics as well as contexts. Additionally, he argues in line with Pennycook et al. (2015), that the bias can be resisted by additional knowledge and increased reflective thinking. The effect of the human bias on receptivity has been supported by several replications (Pfattheicher & Schindler, 2016; Nilsson et al., 2019).

The second mechanism refers to the inability to detect bullshit, which may cause one to confuse vagueness for profundity (Pennycook et al., 2015). In order to recognize something as bullshit it is necessary to detect conflict, such as noticing an untrustworthy source or information that conflicts with common knowledge or specific knowledge of the recipient (Pennycook et al. 2015). In terms of business communication, additional knowledge may include information about the company, the intention and source of publication, which, according to De Neys (2014) may influence the bias towards how people perceive business communication. A study made by Gligoric and Vilotijevic (2019) investigated how contextual factors influence individuals' bullshit receptivity. Their findings showed that contextual factors such as the name of the author, increases the perceived legitimacy of the source, and hence the perceived profundity, which in turn affects the receptivity to pseudo-profound bullshit.

Humans have a biological bias towards believing something said as true, however, situational knowledge can provide additional tools for detecting bullshit. Additionally, the receptivity to pseudo-profound bullshit can either increase or decrease depending on individual associations with contextual information such as perceiving a source as more or less legitimate. Therefore, the first and second hypothesis are generated as follows:

H1. There is no significant difference between the receptivity to pseudo-profound bullshit sustainability statements and real sustainability statements.

H2. Individuals are more receptive to pseudo-profound bullshit sustainability statements that are stated to originate from an annual report, compared to a general business context.

2.2. Human factors

2.2.1. Cognitive ability

The first mechanism of bullshit receptivity is the inability to resist the biological human bias towards believing something said as true due to lack of additional processing (Pennycook et al., 2015). Human beings have a bias towards using intuition in order to act fast in emergency situations and therefore often deliver a less than optimal response to questions that require more than intuition (Stanovich, 2018). In order to recognize something as bullshit the ability to detect conflict is necessary, such as noticing an untrustworthy source or information that conflicts with common knowledge (Pennycook et al. 2015). Individual differences in analytic cognitive style have been found to positively correlate with conflict detection (Pennycook, Fugelsang & Koehler, 2015). Thus, cognitive ability is an important component of pseudo-profound bullshit receptivity (Pennycook et al. 2015).

One way to measure cognitive ability is through the Cognitive Reflection Test (CRT) created by Frederick (2005). The three item CRT consists of questions that are constructed to elicit an intuitive incorrect response. In order to arrive at the correct answer, the respondent has to reconsider and discard the common initial response Frederick (2005). The three item CRT consists of the following questions:

- *If it takes 5 machines 5 minutes to produce 5 products. How long does it take for 100 machines to produce 100 products?*
- *A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?*
- *In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?*

The argument that the questions do in fact trigger an intuitive incorrect response was supported by analyzing the most common wrong answers when testing the CRT. These corresponded with the suggested intuitive answers; 100, 10 and 24 (Frederick, 2005). In the context of bullshit, Pennycook et al. (2015) used the CRT to measure cognitive ability in relation to receptivity to pseudo-profound bullshit. Their findings show that individuals who are more receptive to bullshit score lower on the CRT, which indicates that the test can be used to distinguish between individuals who intuitively accept a bullshit statement, and those who reconsider the profundity of the statement (Pennycook et al., 2015). Pennycook and Ross (2016) argue that the CRT not only measures cognitive ability but that it also, to some degree, can indicate a person's disposition or propensity to think analytically. Critics of the CRT have argued that the commonly used CRT questions may be known due to the test's prevalence, and that the answers are not

fully reliable as a consequence. However, despite a general familiarity with the scale's questions, Bialek and Pennycook (2018) concludes that prior experience does not affect the CRT's predictive validity.

With the above-mentioned research and theory as a foundation, it is assumed that the CRT results will provide similar observations in the present study. Therefore, the third hypothesis is generated as follows:

H3. High cognitive ability is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.

2.2.2. Cynicism

A factor that has not yet been thoroughly investigated together with bullshit receptivity is cynicism. Cynicism represents a dark view of the world and specifically the people in it. A cynic doubts others due to the belief that people act exclusively based on selfish motives and interests (Anson, Mann, & Sherman, 1986). Cynicism can be described as a personality trait that is present across contexts and stable over time (Mohr, Eroglu, & Ellen, 1998). Furthermore, a person's level of cynicism can influence their level of skepticism. An individual who is inclined to doubt the motive behind a commercial (i.e., a cynic) is also more likely to question the substance of the message (i.e., be skeptical) than a less cynic individual (Mohr, Eroglu & Ellen, 1998). In the context of bullshit, it was examined how bullshit is detected in an organization by a skeptical person compared to someone cynical. It was found that a skeptical person is likely to distrust a statement but still see value in additional exploration behind the communication. In comparison, a cynical person would detect bullshit immediately, without feeling the need for exploring it further (Christensen, Kärreman, & Rasche, 2019).

Based on the theory implying that a less cynic individual is less likely to develop skepticism towards a specific statement and that cynical people are more likely to detect bullshit immediately, the fourth hypothesis is developed:

H4. High level of cynicism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.

2.3. Situational factors

2.3.1. Skepticism

While related to cynicism, skepticism differs in the sense that it is a cognitive response which varies depending on context and content (Mohr, Eroglu & Ellen, 1998). This definition was also used by Tan (2002) when developing a scale to measure consumer skepticism towards advertising. The scale contains several assertions which are divided into four factors; disbelief, mistrust, undesirable and misinform which underlie

skepticism (Tan, 2002). Skeptics doubt the actions or words of others but can be convinced by evidence or proof. By accumulating several experiences with different sources of communication (e.g., business communication), an overall sentiment is formed. This sentiment in turn affects skepticism related to a specific experience, for example, business communication in a certain context (Mohr, Eroglu & Ellen, 1998). Furthermore, skepticism may also vary depending on the medium in which the information is conveyed. Individuals who are skeptical towards advertising in general may exhibit different levels of skepticism towards printed advertising versus radio advertising (Obermiller & Spangenberg, 1998).

The existence of a positive correlation between lack of skepticism and bullshit receptivity has been suggested by Pennycook et al. (2015). This proposal is based on the receptivity to epistemically suspect beliefs, meaning beliefs that contradict common naturalistic conceptions of the world, which is founded on lack of skepticism. For example, the belief in angels, and specifically believing that they can move through walls, conflicts with the common notion that things are unable to pass through solid objects (Pennycook et al., 2015), hence, the need for skepticism is absent.

Although it is rare to believe in angels moving through walls, the mechanisms behind the belief are similar to those influencing the receptivity to pseudo-profound bullshit. Being receptive to pseudo-profound bullshit means lacking the ability to detect and distinguish bullshit from non-bullshit, as well as being unable to identify the need for skepticism (Pennycook et al., 2015). The term need for skepticism means that there exists an external cue that skepticism is required, facilitating the detection of bullshit. For pseudo-profound bullshit this external cue is removed due to its vagueness (Pennycook et al., 2015). However, the definition of skepticism as dependent on context and content by Mohr, Eroglu and Ellen (1998) implies that skeptics have developed this cue internally towards certain sources or situations.

In the present context of business communication regarding sustainability, there is a growing concern among consumers that companies are spreading false and misleading information for reputational and monetary gain (Goh & Balaji, 2016). Misinformation may cause extensive distrust regarding all environmental claims, including accurate ones. The core problem lies with the consumers inability to test the validity of environmental claims. Unlike most product claims, these cannot be verified by consumers through observing quality, performance, durability or additional characteristics (Cohen, 1991). Since skeptics can be convinced by evidence or proof, the inability to verify sustainability claims may result in increased skepticism in this specific context.

Based on the above-mentioned theory on skepticism, and put in the context of sustainable claims, it is expected that individuals' level of skepticism will affect their

receptivity to pseudo-profound bullshit. Therefore, the fifth hypothesis is developed as follows:

H5. High level of skepticism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.

2.3.2. Perceived knowledge

Mohr, Eroglu and Ellen (1998) suggest that perceived knowledge may have an effect on skepticism. Further they theorize that consumers with lower levels of knowledge are more likely to be misled by false claims. However, the results of their study did not find any significant correlation between perceived knowledge and skepticism, instead they found a significant positive correlation between perceived knowledge and cynicism. As stated previously in the theoretical framework, an individual's level of cynicism affects their level of skepticism (Mohr, Eroglu & Ellen, 1998), which may indicate that perceived knowledge has an influence on skepticism through its influence on cynicism. Furthermore, knowledge affects pseudo-profound bullshit receptivity since the detection of bullshit is based on finding conflict with common knowledge or knowledge that is specific to the recipient (Pennycook et.al, 2015).

The relevant knowledge to investigate is knowledge regarding the context since it can trigger the situational factor skepticism. From this, it can be argued that the higher the level of perceived knowledge within the topic of sustainability, the lower is the likelihood of being misled by inaccurate statements from companies. Therefore, the sixth hypothesis is generated as follows:

H6. High level of perceived knowledge is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.

2.4. Hypothesis development

Based on the purpose of this thesis; to investigate which factors influence individuals' receptivity to pseudo-profound bullshit statements regarding sustainability in business communication, and the theoretical framework that has been developed from previous research, six hypotheses have been developed. **H1** and **H2** aim to investigate if there is a difference in the receptivity to real and pseudo-profound bullshit statements, as well as how the context in which they are presented influence bullshit receptivity. **H3** and **H4** are related to the human factors described, specifically, how cognitive ability and cynicism influence bullshit receptivity. **H5** and **H6** are connected to the situational factors which depend on the context of sustainability statements in business communication, and specifically how skepticism and perceived knowledge influence bullshit receptivity.

Table 1. Hypothesis development

H1	There is no significant difference between the receptivity to pseudo-profound bullshit sustainability statements and real sustainability statements.
H2	Individuals are more receptive to pseudo-profound bullshit sustainability statements that are stated to originate from an annual report, compared to a general business context.
H3	High level of cognitive ability is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.
H4	High level of cynicism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.
H5	High level of skepticism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.
H6	High level of perceived knowledge is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.

3. Methodology

3.1. Scientific approach

With the aim to investigate which factors influence individuals' receptivity to pseudo-profound bullshit statements related to sustainability in business communication, this study follows the quantitative scientific approach described by Bryman and Bell (2015). The method used in a study is often chosen based on the method used in previous research in the same field (Churchill, 1999). The majority of the previous studies on pseudo-profound bullshit use quantitative approaches, which is the reason why the authors argue that a quantitative approach is the most appropriate. Prior studies on pseudo-profound bullshit have used surveys as a foundation to test their hypotheses and assumptions (De Neys, 2014; Pennycook et al., 2015; Pennycook, Fugelsang & Koehler, 2015; Pfattheicher & Schindler, 2016; Petrocelli, 2018). The survey in this thesis uses several previously tested scales to measure the variables. Since existing theory and previous research lay the foundation for this thesis, our study is built as a deductive research which is based on available literature to generate hypotheses set out to be tested and investigated (Bryman & Bell, 2015). To analyze the data, an explorative analysis was made to examine to which extent the independent variables influenced the dependent variables.

The survey consisted of a self-completion questionnaire, which means that a questionnaire was distributed to respondents who consequently filled it out independently by answering a predetermined set of questions (Bryman & Bell, 2015). An alternative method that could have been applied to this study is a content analysis. Instead of a self-completion questionnaire, the respondents would have been asked to verbally describe the content and how they perceived it. However, due to the limited time frame and social restrictions caused by the Covid-19 pandemic, this method would have involved difficulties in terms of collecting the appropriate quantity of data.

3.2. Questionnaire design

3.2.1. Questionnaire

The survey was conducted through a self-completed anonymous questionnaire which was created using the survey-tool Qualtrics. The questionnaire consisted of six question blocks with four blocks primarily focused on the investigative purpose of this study (see Figure 1). All questions used Likert scales and were written in Swedish since the questionnaire targeted Swedish consumers. For the same reason the scales originating from previous research were translated from English to Swedish. See Appendix B for the original scales and the full survey. Below, a visualization of the survey flow is shown.

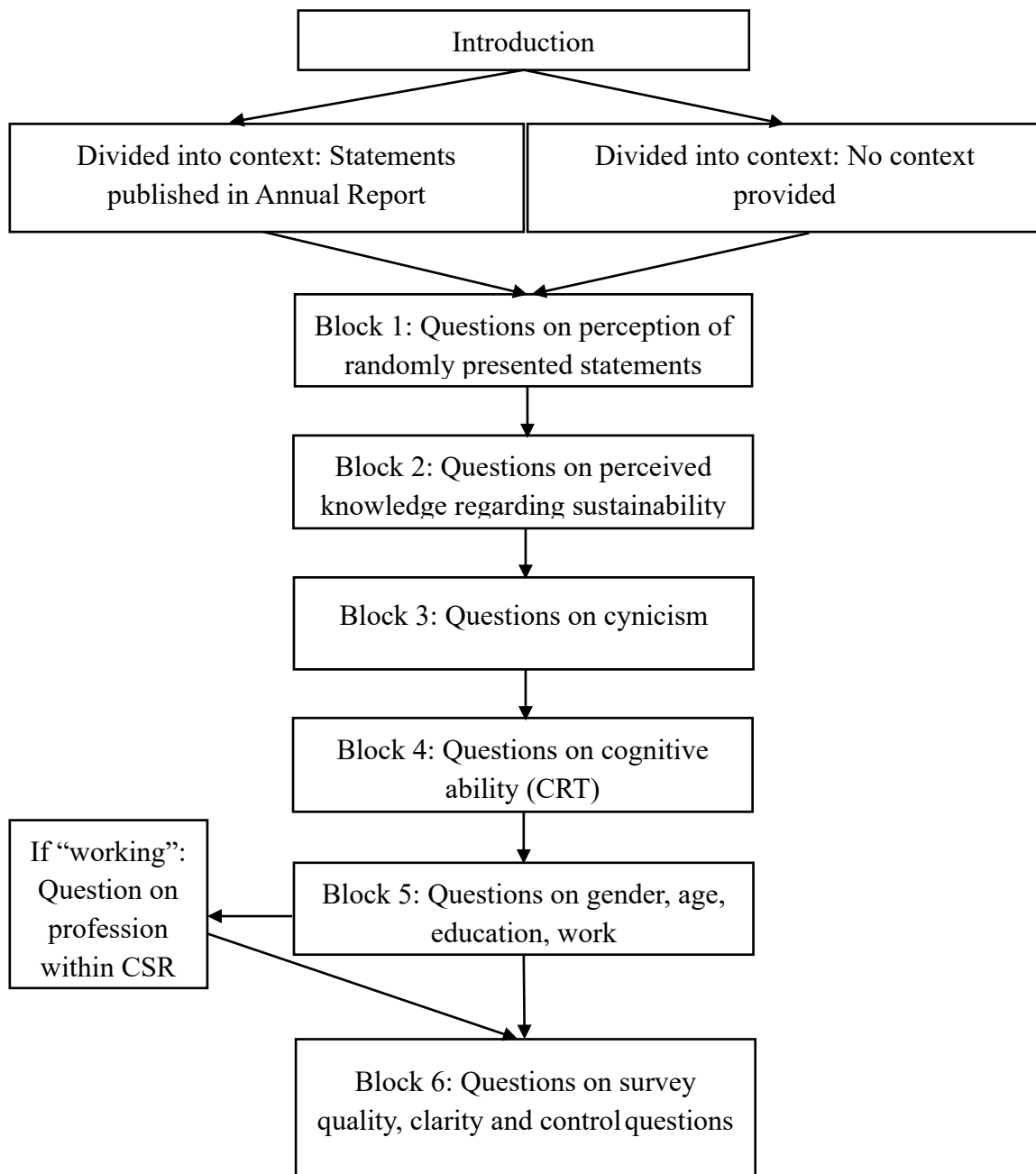


Figure 1. Visualization of the Survey flow.

Firstly, the respondents were introduced to the purpose of the questionnaire, estimated completion time and information regarding anonymity. They were also given information regarding the donation to the World Wide Fund for Nature (WWF) for their participation in the questionnaire. Thereafter information regarding GDPR was presented, and the respondents were given the option to consent or not consent to participate in the study. Following this, respondents were randomly divided into two groups which were shown two different contexts as background for the next question block.

In the first block, respondents were shown four business statements out of which two originated from actual companies and two were randomly generated pseudo-profound bullshit statements. In total, eight statements were used in the survey, and these were divided into two sets of four. The respondents were randomly presented with a set of statements which were rated using a 7-point Likert scale consisting of eleven items. In the second block, the respondents rated their perceived knowledge regarding sustainability using a 7-point Likert scale consisting of six items with an attention check added as a seventh item. In the third block, the respondents rated their level of cynicism on a 7-point Likert scale consisting of six items. In the fourth block the respondents answered three free text questions measuring cognitive ability. The fifth block gathered demographic information about the respondents. The sixth and final block collected information regarding the quality of the questionnaire and included two control questions to assess the reliability of responses.

3.3. Scales and variables

In the following section the constructed variables and the scales used to measure them will be presented in the same order as in the survey flow.

3.3.1. Context

To investigate if different contexts influence bullshit receptivity, the independent variable context was created. As mentioned, the respondents were randomly divided into two different groups describing different contexts. Group 1 ($n = 47$) was given the information that the statements were published in annual reports the previous year. Group 2 ($n = 47$), the control group, did not receive any specific information regarding the context of the communicated statements apart from the general context of business communication regarding sustainability.

3.3.2. Receptivity

In order to examine receptivity, each respondent was presented with two pseudo-profound bullshit statements and two real statements, which were rated to measure the dependent variables bullshit receptivity and real receptivity. Since no existing computer program for generating random bullshit statements in a sustainability context was identified, the program used was constructed by the authors (see Appendix B). This results in limitations concerning the complexity of the program and the diversity in statements which can be generated.

The variable bullshit receptivity was measured based on the ratings of the pseudo-profound bullshit statements, which were generated using a program constructed through the programming language Python. This program was designed to generate a randomized sentence consisting of either four or six words. The length of either four or

six was randomized which simultaneously determined whether the first word of the sentence would be “For” or “We”. The sentences were constructed using the following syntax:

1) first word, 2) indefinite article, 3) adjective, 4) noun, or;

1) first word, 2) verb, 3) conjunction, 4), indefinite article, 5) adjective, 6) noun.

The adjectives and nouns used in the program were all related to sustainability and characterized by positivity. These words were inspired by the real company statements included in the survey. A total of 20 sentences were generated out of which four were randomly selected and adjusted to be grammatically correct. The randomly generated pseudo-profound bullshit statements and the real statements are summarized in Table 2.

Table 2. Summary of statements and their origin

Name	Statement	Origin	<i>n</i>
Bullshit			
Bullshit 1	For a greener Sweden	Randomly generated	47
Bullshit 2	We work for a sustainable planet	Randomly generated	46
Bullshit 3	We fight for a CO2-neutral world	Randomly generated	48
Bullshit 4	For a sustainable climate	Randomly generated	47
Real			
Real 1	Sweden’s greenest brand	Coop	46
Real 2	Better for people + our planet	IKEA	46
Real 3	We want to set an example within sustainability	Systembolaget	48
Real 4	Develop & manufacture on nature’s terms	Fjällräven	48

Note: Statements in Swedish

Bullshit 1 = “För ett grönare Sverige”, Bullshit 2 = “Vi jobbar för en hållbar planet”, Bullshit 3 = “Vi kämpar för en CO2-neutral värld”, Bullshit 4 = “För ett hållbart klimat”, Real 1 = “Sveriges grönaste varumärke”, Real 2 = “Bättre för människor + vår planet”, Real 3 = “Vi vill vara ett föredöme inom hållbarhet”, Real 4 = “Utveckla & tillverka på naturens villkor”

The variable real receptivity was measured based on the ratings of the real statements, which were retrieved from actual sustainable companies, featured on the list “Sweden - Sustainable Brand Index 2021”. The rankings in the list indicate how brands are perceived by their important stakeholders in terms of sustainability and the chosen companies were part of the top 25 (Sustainable Brand Index, 2021). The companies whose statements were presented in the questionnaire were categorized by the authors as being part of the consumer goods industry and therefore determined to be comparable. All of the statements used in the survey were either quoted from the sustainability section of the respective company websites, their annual reports or from slogans related to sustainability.

Each statement was followed by eleven assertions, which the respondents were asked to rate on a 7-point scale, from 1 (strongly disagree) to 7 (strongly agree). The scale was developed by Tan (2002) to measure consumer skepticism and consists of several assertions which are divided into four factors; disbelief, mistrust, undesirable and misinform. Out of these eleven items, three were used to measure the respondents' receptivity, one was used to measure the statements' profundity, and seven were used to measure skepticism. The three assertions used to measure the dependent variable receptivity had a positive connotation, in contrast to the assertions measuring skepticism.

3.3.3. Profundity

The dependent variable profundity was not part of the main study and thus not part of the hypothesis development. The profundity assertion was integrated to the assertions investigating receptivity and skepticism. It was included in order to investigate if there is a difference between receptivity and perceived profundity towards bullshit contrary to the findings of Pennycook et al. (2015).

3.3.4. Skepticism

The independent variable skepticism was measured in the same question block as receptivity and profundity. Out of the eleven assertions in this block, seven were used to measure skepticism. Subsequently, these assertions are also part of the consumer skepticism scale developed by Tan (2002). The skepticism scale adapted for this study used assertions from the factors mistrust and misinform. The assertions used negations and had a negative connotation. The respondents were asked to rate to which extent they agreed with the assertions on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

3.3.5. Perceived knowledge

In order to measure the independent variable perceived knowledge, a 7-point scale developed by Ellen, Eroglu and Webb (1997) was used. This scale was further studied by Mohr, Eroglu and Ellen (1998). The scale consists of six assertions concerning perceived knowledge regarding sustainability and recycling (e.g., "I know more about recycling than the average person"). The respondents were asked to rate to which extent they agreed with the assertions on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale's Cronbach's alpha was $\alpha = 0.75$ (see Appendix A, Table 1). In the same question block, an attention check question was incorporated to ensure that the respondents paid attention to the instructions when answering the questionnaire.

3.3.6. Cynicism

The scale used to measure the independent variable cynicism was developed by Kanter and Mirvis (1989) and was used in the previously mentioned study by Mohr, Eroglu and Ellen (1998). The scale consists of six assertions regarding how the respondent perceives the world and other people (e.g., “Most people are not really honest by nature”). The respondents were asked to rate to which extent they agreed with the assertions on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The internal consistency was tested through Cronbach’s alpha, which was $\alpha = 0.78$ (see Appendix A, Table 1).

3.3.7. Cognitive Ability

The Cognitive Reflection Test (CRT) developed by Frederick (2005) was used to measure the independent variable cognitive ability. The CRT used in this survey consists of a three-item test where the respondents filled in their answers using free text. The questions are presented in the theoretical framework under cognitive ability (see section 2.3.3). The internal consistency was tested through Cronbach’s alpha, which was $\alpha = 0.73$ for the CRT (see Appendix A, Table 1). Since critics of the CRT have argued that the commonly used CRT questions may be known due to its attention and prevalence, the question regarding the price of a bat and a ball was changed and instead referred to the price of a juice and a straw.

3.4. Insights from preparatory study

A preparatory study was conducted in order to evaluate the survey. Referring to Connelly (2008), a pre-study is a suitable tool to gain insight of usability and new perspectives on the experiment design. The preparatory study was conducted between the 24th and 31st of March 2021. A sample of $n = 12$ respondents answered the questionnaire out of which three respondents were asked to think out loud while answering the questions. Based on suggestions, a question investigating if the respondent was professionally active within CSR was added. The preparatory study received comments regarding its length, which was expected. However, in order to investigate the two human and two situational factors and considering that the assertions of each section followed a pre-set scale, all sections were deemed necessary.

3.5. Data collection and analysis

3.5.1. Data collection

The questionnaire was distributed between the 24th of March until the 15th of April 2021 and generated a total of $n = 94$ valid responses. The questionnaire was distributed through an online link, which was shared through Facebook, Instagram and LinkedIn,

together providing a convenience sample. The main weakness with a convenience sample is the inability to generalize the findings, since it is not a representative sample (Bryman & Bell, 2015). However, the selected procedure was chosen with the ambition to reach a high response rate in a time efficient way. The different media platforms were selected due to their audience which aligns with the consumer perspective of this thesis.

3.5.2. Drop-out analysis

In total, $n = 135$ respondents participated in the main study. First, the group of people who had not finished the questionnaire was excluded ($n = 18$). The majority of these respondents dropped out after completing approximately 36% of the questionnaire. This may indicate that the first part with information regarding GDPR and the purpose of the survey, as well as the many assertions connected to the first statements, was a threshold for continuing the survey. Due to incorrectly answering the first attention check $n = 9$ responses were excluded and $n = 14$ responses were excluded due to incorrect responses to the control questions.

In total, the survey provided $n = 94$ valid responses. The distribution between genders was relatively equal with 43.6% female and 56.4% male respondents. The mean age of the respondents was 28.7 and 67% were in the age range of 18-25 years old. The majority of the respondents were students (55.3%) and the remaining were employed (44.7%), out of which eight respondents worked with CSR (8.5%) (see Table 3).

Table 3. Overview of socio-demographic variables

Variable	<i>N</i>	<i>n</i>	% of total sample	<i>M</i>
	94			
Gender				
Female		41	43.6	
Male		53	56.4	
Age (years)				27.9
18-25		63	67	
26-35		18	19.1	
36-50		4	4.2	
50-65		9	9.6	
Occupation				
Student		52	55.3	
Employed		42	44.7	
Working with CSR				
Yes		8	8.5	
No		34	36.2	

Note: the alternatives for gender were man, woman, non-binary, other, prefer not to disclose.

3.5.3. Data analysis

The collected data was exported from Qualtrics to Excel and filtered to exclude responses that were incomplete or had inadequate answers to the control questions. The Excel file was split into two files in order to distinguish the two context groups and subsequently imported and merged in IBM SPSS Statistics v. 27 which was the statistical tool used to conduct the analysis. The hypotheses were tested through conducting a one-sample t-test, independent t-tests, a Pearson's correlation test and a linear regression analysis. In case the data did not follow a specific distribution, nonparametric tests were also conducted.

3.6. Reliability and validity

3.6.1. Reliability

Reliability is defined by the consistency of a measure of a concept, and if repeated research would result in the same findings (Bryman & Bell, 2015). The internal reliability should be ensured on multi-item measures in which the respondents' answers are summarized to form an overall score. These items must be coherent in order to ensure internal consistency which is measured by Cronbach's alpha. The measure varies between 0 (no internal reliability) and 1 (perfect internal reliability). A Cronbach's alpha of 0.7 has been suggested to be efficient (Bryman & Bell, 2015). Since the randomizer function in Qualtrics was used, each respondent evaluated four out of eight statements. Therefore, the alphas for receptivity and skepticism were computed for each statement. All statements had an $\alpha > 0.7$, except for one of the real statements, which had an alpha of 0.69. However, since this thesis mainly focuses on bullshit receptivity it was considered to be acceptable. Additionally, all Cronbach's alphas for the used scales were > 0.7 (see Appendix A, Table 1).

3.6.2. Validity

The validity of a study determines whether the research measures what is set out to be measured, i.e., its ability to answer the research questions (Bryman & Bell, 2015). To secure internal validity, the survey used established scales to measure the independent variables. Further, the external validity of a study defines whether the results can be generalized beyond the specific context (Bryman & Bell, 2015). The field of this study is relatively narrow which weakens the generalizability. Nonetheless, the theory behind the study's independent variables (i.e., cognitive ability, cynicism, skepticism and perceived knowledge) has been applied to several contexts, including research on consumer perception of business communication and advertising (Mohr, Eroglu, & Ellen, 1998; Bonini, Graffeo, & Polonio, 2015). Therefore, external validity is strengthened. Furthermore, ecological validity is a measure of how the results predict behaviors applicable to the real world (Bryman & Bell, 2015). Since half of the

evaluated statements are real, i.e., originate from actual companies, the results of how they are perceived are arguably valid in a real-world setting. However, in reality, the statements are often presented together with additional information, e.g., company name and context, which likely influences how they are perceived in reality.

3.7. Quality of survey data

At the end of the questionnaire, the respondents were asked to judge the survey based on its usability and clarity, in order to ensure validity. It was shown that 89% of the respondents found the questions clearly stated and that 67% found the questions easy to answer. Additionally, 85% of the respondents did not experience that the questions tried to influence their answers in a certain direction (for details see Appendix A, Table 6). The very last question was an open question where the respondents were asked to leave a comment regarding the survey. This question was answered by 24% of the respondents with the majority of the comments mentioning that more information about the companies should be presented in order to judge the statements properly. In order to ensure that the respondents paid attention to the questions, three questions with Instructional Manipulation Check functions were added. One attention-check question was added in the middle of the questionnaire where the respondents were asked to choose a specific alternative, and two control questions in the end regarding the purpose of the survey.

4. Results

In this chapter the results from the data analysis will be presented. First, the analytical tool will present how the hypotheses were tested, followed by the results of the conducted tests. Thereafter, the hypotheses will be summarized. Lastly, additional findings will be presented.

4.1. Analytical tool

The following section presents an overview of how each hypothesis was evaluated. Descriptive statistics regarding the respondents are presented in the methodology chapter (see Table 3). Throughout the analysis, p-values on a significance level of 5% ($p < 0.05$) were used to test the hypotheses.

Hypothesis **H1** was evaluated through a one-sample t-test which compared the mean receptivity with a predetermined test value in order to observe differences in receptivity to real and pseudo-profound bullshit statements.

Hypothesis **H2** was evaluated through an independent t-test in order to observe differences in receptivity between the group that was shown the statements in a general business context and the group that was shown the statements in an annual report context.

Hypotheses **H3**, **H4**, **H5** and **H6** were evaluated through independent t-tests in order to observe differences in receptivity between the groups based on low or high levels of cognitive ability, cynicism, perceived knowledge and skepticism. These hypotheses were further evaluated through a Pearson's correlation test and a linear regression analysis.

Since the data analysis is based on what can be considered a small sample ($n = 94$), nonparametric tests were conducted in addition to the parametric tests in case the data did not follow a specific distribution. The Mann Whitney U test was used as the nonparametric equivalent to the independent t-test and generated results that corresponded with the results from the parametric tests. Since the independent t-tests make up the main part of the analysis, and generated corresponding results to the Mann Whitney U test, no additional nonparametric tests were conducted. Therefore, the following sections present the results from the parametric tests.

4.2. Bullshit receptivity and real receptivity

This section describes the evaluation of hypothesis H1. Firstly, the differences in mean receptivity for each statement was illustrated through error bars and box plots. When evaluating every statement separately, the general pattern shows that respondents are

slightly more receptive to pseudo-profound bullshit statements than real statements. However, no major differences are observable (see Figure 2).

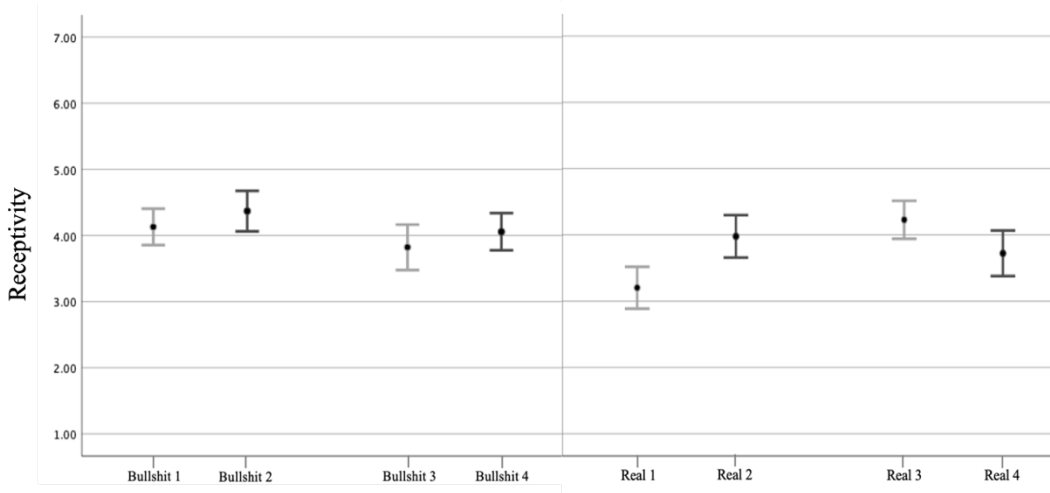


Figure 2. Receptivity for real and bullshit statements

On an aggregate level, investigating if respondents generally had higher receptivity to pseudo-profound bullshit statements compared to real statements, the difference is minor (see Figure 3). The difference in mean receptivity for real statements ($M = 3.79$) and pseudo-profound bullshit statements ($M = 4.10$) is minimal (see Appendix A, Table 2). This implies that the statements are rated similarly, with only a slight difference.

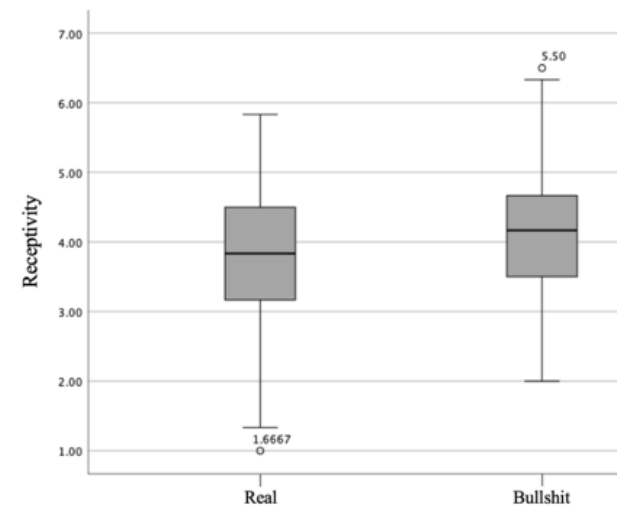


Figure 3. Aggregated receptivity for real and bullshit statements

To test H1 and examine differences in receptivity towards pseudo-profound bullshit statements and real statements a one-sample t-test with the test value 4 was conducted. The test value represents the middle value of the 7-point scale which was used to measure receptivity. For bullshit statement 2 and real statement 1, a significant

difference in receptivity compared to the test value was found. Regarding the remaining statements, no significant difference from the test value was found (see Table 4).

Table 4. One sample t-test comparing receptivity for statements with pre-determined test value

Receptivity	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Bullshit 1	46	4.13	0.93	45	0.95	.346
Bullshit 2	46	4.37	1.03	45	2.43	.019*
Bullshit 3	48	3.84	1.16	47	-0.95	.345
Bullshit 4	47	4.06	0.96	46	0.41	.687
Real 1	46	3.20	1.06	45	-5.08	<.001**
Real 2	46	3.98	1.08	45	-0.14	.892
Real 3	48	4.23	0.98	47	1.61	.114
Real 4	48	3.72	1.19	47	-1.62	.111

Note: * $p < 0.05$, ** $p < 0.01$

One sample t-test comparing receptivity for statements with pre-determined test value (= 4)

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO2-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

The results from the one sample t-test imply that the pseudo-profound bullshit statements and real statements are generally rated similarly. To further evaluate H1, a Pearson’s correlation test was conducted which showed a significant positive correlation between bullshit receptivity and real receptivity (see Table 9). The results from the correlation study imply that individuals who have a high receptivity to pseudo-profound bullshit statements also have a high receptivity to real statements. This further supports that there is only a slight difference between the receptivity for the two types of statements as demonstrated in Figure 2, Figure 3 and Table 4.

Therefore, **H1** - There is no significant difference between the receptivity to pseudo-profound bullshit sustainability statements and real sustainability statements - was **partially empirically supported**.

4.3. Context

In order to evaluate hypothesis H2 and examine differences in receptivity depending on the context in which the statements were presented, an independent t-test with context as the independent variable and receptivity as the dependent variable was conducted. No significant difference in receptivity between the two groups was found (see Table 5).

Table 5. The effects of context on receptivity

Receptivity	General			Annual report			df	t	p
	n	M	SD	n	M	SD			
Bullshit 1	24	4.28	0.89	22	3.97	0.96	44	1.23	.265
Bullshit 2	24	4.50	1.09	22	4.23	0.97	44	0.89	.376
Bullshit 3	23	4.04	1.02	25	3.65	1.27	46	1.17	.249
Bullshit 4	23	3.83	1.15	24	4.28	0.69	45	-1.64	.107
Real 1	24	3.21	1.12	22	3.20	1.02	44	0.36	.972
Real 2	24	4.13	0.99	22	3.82	1.17	44	0.96	.341
Real 3	23	4.28	1.16	25	4.19	0.81	46	0.31	.759
Real 4	23	3.62	1.29	25	3.81	1.10	46	-0.55	.584

Note: Independent t-test comparing differences in mean receptivity between those who were shown the statements in a general context and those who were shown the statements in the context of an annual report.

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO2-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

When observing the differences in mean receptivity between the groups, the receptivity was generally lower for the group that was shown the statements in an annual report context which is not in line with our expectations (see also Appendix A, Figure 1). However, the difference was not significant. Furthermore, in the linear regression analysis, no significant relationship was found between the context variable and bullshit receptivity (see Table 11).

Therefore, **H2** - Individuals are more receptive to pseudo-profound bullshit sustainability statements that are stated to originate from an annual report, compared to a general business context - was **not empirically supported**.

4.4. Human factors

4.4.1. Cognitive ability

In order to examine differences in receptivity between those with low cognitive ability and high cognitive ability, respondents were assigned a score ranging from 0-1 which reflected the percentage of the CRT questions that they answered correctly. Respondents who scored in the range of 0 to 67%, meaning those with 0 to 2 out of 3 correct answers, were assigned with low cognitive ability ($n = 54$). Respondents who scored 100%, meaning 3 out of 3 correct answers, were assigned with high cognitive ability ($n = 40$). An independent t-test with cognitive ability as the independent variable and receptivity as the dependent variable was conducted. For bullshit statement 2 and 3 we found a significant difference in receptivity between those with low cognitive ability

and those with high cognitive ability. Regarding the remaining statements, no significant difference in bullshit receptivity was found between the two groups (See Table 6).

Table 6. The effects of cognitive ability on receptivity

Receptivity	Low CRT			High CRT			<i>df</i>	<i>t</i>	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Bullshit 1	27	4.11	1.07	19	4.15	0.70	44	-0.17	.869
Bullshit 2	27	4.64	1.05	19	3.98	0.90	44	2.23	.031*
Bullshit 3	27	4.20	0.92	21	3.38	1.30	46	2.56	.014*
Bullshit 4	26	4.24	0.79	21	3.83	1.11	45	1.51	.139
Real 1	27	3.11	1.08	19	3.33	1.06	44	-0.69	.492
Real 2	27	3.84	1.26	19	4.18	0.75	43	-1.13	.263
Real 3	27	4.19	0.96	21	4.29	1.03	46	-0.35	.730
Real 4	27	3.79	1.13	21	3.63	1.27	46	0.45	.658

Note: * $p < 0.05$

Independent t-test comparing differences in mean receptivity between those with high and low cognitive ability.

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO2-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

When observing differences in mean receptivity between the two groups they do not fully align with our expectation that receptivity would be higher for those with low cognitive ability. However, for the pseudo-profound bullshit statements, three out of four were rated higher by those with lower cognitive ability and out of these, two results were significant. The correlation between bullshit receptivity and cognitive ability was further investigated in a Pearson’s correlation test where a significant negative correlation was found (see Table 10). Moreover, a linear regression analysis was conducted to further investigate the explanatory value of the variable cognitive ability in relation to bullshit receptivity. The analysis showed a significant relationship implying that increased cognitive ability results in decreased bullshit receptivity (see Table 11). Based on the combined results from the independent t-test, the Pearson’s correlation test and the linear regression analysis, H3 has partial empirical support but cannot be considered fully supported.

Therefore, **H3** - High level of cognitive ability is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements - was **partially empirically supported**.

4.4.2. Cynicism

In order to examine differences in receptivity between those with low cynicism and high cynicism, respondents were assigned a score ranging from 1-7 which reflects the mean of their answers on the 7-point cynicism scale. Respondents with a cynicism score of 3.17 or lower were assigned with low cynicism ($n = 47$) and those with a score between 3.33 and 6.83 were assigned with high cynicism ($n = 47$). An independent t-test with cynicism as the independent variable and receptivity as the dependent variable was conducted. For bullshit statement 2 we found a significant difference in receptivity between those with low cynicism and those with high cynicism. However, this difference is contradictory to our hypothesis since the receptivity is significantly higher for those with high cynicism as opposed to significantly lower. Regarding the remaining statements, no significant difference in bullshit receptivity was found between the two groups (See Table 7).

Table 7. The effects of cynicism on receptivity

Receptivity	Low cynicism			High cynicism			<i>df</i>	<i>t</i>	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Bullshit 1	23	3.91	1.02	23	4.35	0.79	44	-1.62	.113
Bullshit 2	23	4.07	0.94	23	4.67	1.05	44	-2.02	.049*
Bullshit 3	24	3.88	1.33	24	3.81	0.10	46	0.21	.830
Bullshit 4	23	4.29	0.88	24	3.83	0.99	45	1.66	.103
Real 1	23	3.12	1.18	23	3.29	0.95	44	-0.55	.585
Real 2	23	4.09	1.13	23	3.87	1.04	44	0.68	.500
Real 3	24	4.29	0.94	24	4.17	1.04	46	0.44	.665
Real 4	24	3.81	1.27	24	3.64	1.11	46	0.48	.631

Note: * $p < 0.05$

Independent t-test comparing differences in mean receptivity between those with high and low cynicism.

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO₂-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

When observing differences in mean receptivity between the two groups they do not fully align with our expectation that receptivity would be higher for those with low cynicism. This expectation only holds for bullshit statement 3 and 4, with only a slight difference for bullshit statement 3, and for real statements 2, 3 and 4. The correlation and relationship between bullshit receptivity and cynicism was further investigated in a Pearson’s correlation test and a linear regression analysis where no significant results were found (see Table 10 and 11).

Therefore, **H4** - High level of cynicism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements - was **not empirically supported**.

4.5. Situational factors

4.5.1. Skepticism

In order to examine differences in receptivity between those with low skepticism and high skepticism, respondents were assigned a score ranging from 1-7 which reflects the mean of their answers on the 7-point skepticism scale. Respondents with a skepticism score of 3.64 or lower were assigned with low skepticism ($n = 45$) and those with a score between 3.68 and 5.86 were assigned with high skepticism ($n = 49$). An independent t-test with skepticism as the independent variable and receptivity as the dependent variable was conducted. A significant difference in receptivity between those with low skepticism and those with high skepticism was found for bullshit statement 4. A significant difference in receptivity between the groups was also found for real statement 2, 3 and 4 (see Table 8).

Table 8. The effects of skepticism on receptivity

Receptivity	Low skepticism			High skepticism			df	t	p
	n	M	SD	n	M	SD			
Bullshit 1	22	4.39	0.96	24	3.88	0.84	44	1.89	.065
Bullshit 2	22	4.64	1.15	24	4.12	0.86	44	1.72	.093
Bullshit 3	23	4.08	1.20	25	3.61	1.09	46	1.43	.160
Bullshit 4	22	4.35	0.87	25	3.60	0.95	45	4.01	<.001**
Real 1	22	3.19	1.06	24	3.21	1.09	44	-0.04	.972
Real 2	22	4.45	1.02	24	3.54	0.95	44	3.14	.003*
Real 3	23	4.68	0.78	25	3.81	0.98	46	3.37	.002*
Real 4	23	4.34	0.87	25	3.15	1.15	46	4.04	<.001*

Note: * $p < 0.05$, ** $p < 0.01$

Independent t-test comparing differences in mean receptivity between those with high and low skepticism.

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO₂-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

When observing differences in mean receptivity between the groups, the mean is consistently higher for those with low skepticism, except for real statement 1. The correlation between bullshit receptivity and skepticism was further investigated in a Pearson’s correlation test where a significant negative correlation was found (see Table 10). Additionally, a linear regression analysis was conducted to investigate the

explanatory value of the variable skepticism in relation to bullshit receptivity. The analysis showed a significant result implying that increased skepticism results in decreased bullshit receptivity (see Table 11). Based on the combined results from the independent t-test, the correlation test and the linear regression analysis, H5 has partial empirical support but cannot be considered fully supported.

Therefore, **H5** - High level of skepticism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements - was **partially empirically supported**.

4.5.2. Perceived knowledge

In order to examine differences in receptivity between those with low perceived knowledge and high perceived knowledge, respondents were assigned a score ranging from 1-7 which reflects the mean of their answers on the 7-point perceived knowledge scale. Respondents with a perceived knowledge score of 4.67 or lower were assigned with low perceived knowledge ($n = 44$) and respondents with a score between 4.83 and 7 were assigned with high perceived knowledge ($n = 50$). An independent t-test with perceived knowledge as the independent variable and receptivity as the dependent variable was conducted. No significant results were found for any of the statements (see Table 9).

Table 9. The effects of perceived knowledge on receptivity

Receptivity	Low perc. knowledge			High perc. knowledge			<i>df</i>	<i>t</i>	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Bullshit 1	20	4.15	0.70	26	4.12	1.09	44	0.12	.902
Bullshit 2	20	4.07	0.81	26	4.60	1.14	44	-1.79	.080
Bullshit 3	24	3.78	1.05	24	3.90	1.28	46	-0.37	.713
Bullshit 4	23	3.90	0.87	24	4.21	1.03	45	-1.11	.273
Real 1	20	3.35	0.83	26	3.09	1.22	43	0.86	.394
Real 2	20	3.78	0.81	26	4.13	1.24	44	-1.08	.287
Real 3	24	4.00	1.03	24	4.46	0.91	46	-1.64	.108
Real 4	24	3.50	1.18	24	3.94	1.17	46	-1.31	.197

Note: Independent t-test comparing differences in mean receptivity between those with high and low perceived knowledge.

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO2-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

When observing differences in mean receptivity between the two groups they do not align with our expectation that receptivity would be higher for those with low perceived knowledge. Out of the eight statements, only bullshit statement 1 and real statement 1

indicate that low perceived knowledge results in higher receptivity. The correlation and relationship between bullshit receptivity and perceived knowledge was further investigated in a Pearson's correlation test and a linear regression analysis where no significant results were found (see Table 10 and 11).

Therefore, **H6** - High level of perceived knowledge is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements - was **not empirically supported**.

4.6. Pearson's correlation test

In order to strengthen the test results, and to validate the hypothesis evaluation, two additional tests were conducted. Firstly, a Pearson's correlation test was conducted in order to examine correlations between the variables. It was found that bullshit receptivity has a significant positive correlation with real receptivity. A significant negative correlation was found between bullshit receptivity and cognitive ability as well as between bullshit receptivity and skepticism (see Table 10). The dependent variable bullshit receptivity was found to be significantly negatively correlated with cognitive ability and skepticism.

Table 10. Pearson's correlation test

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1 Bullshit receptivity ^a	3.86	0.96	1					
2 Real receptivity ^b	4.10	0.86	.348**	1				
3 Cognitive ability	0.63	0.37	-.248*	.119	1			
4 Cynicism	3.34	1.01	.005	-.110	.114	1		
5 Skepticism	3.69	0.85	-.462**	-.502**	.079	.109	1	
6 Perceived knowledge	3.78	0.88	-.184	.151	-.004	.065	-.111	
7 Profundity ^c	4.79	0.83	.380**	.439**	-.121	-.248*	-.558**	.013

*p<0.05, **p<0.01

^a Level of receptivity to pseudo-profound bullshit statements

^b Level of receptivity to real statements

^c Profundity rating per statement

4.7. Linear regression analysis

A linear regression analysis was conducted to further strengthen the results presented above (Table 11). Cognitive ability and skepticism were found to significantly contribute to the regression models for bullshit receptivity and real receptivity. In the analysis, the significant F-values support the assumption that the variables in the models reliably predict the dependent variable receptivity, additionally supported by the

adjusted R^2 . Moreover, a dummy variable was created to test the explanatory value of the context variable.

Table 11. Linear regression for bullshit receptivity and real receptivity

Variables	<i>N</i>	Unstandardized B-coefficient	<i>t</i>	St. Error	Adjusted R^2	<i>F</i>
Bullshit receptivity^a	94				0.266	6.609**
Real receptivity	94	0.195	1.89	0.103		
Cognitive ability	94	-0.575*	-2.74	0.209		
Cynicism	94	0.073	0.96	0.077		
Skepticism	94	-0.343*	-3.26	0.105		
Perceived knowledge	94	0.104	1.10	0.094		
Dummy Context ^c	94	0.102	0.67	0.154		
Real receptivity^b	94				0.275	6.891**
Bullshit receptivity	94	0.202	1.89	0.107		
Cognitive ability	94	0.499*	2.31	0.216		
Cynicism	94	-0.083	-1.06	0.078		
Skepticism	94	-0.423**	-4.06	0.104		
Perceived knowledge	94	0.078	0.82	0.096		
Dummy Context ^c	94	0.028	0.18	0.157		

* $p < 0.05$.

** $p < 0.001$

^a Level of receptivity to pseudo-profound bullshit statements

^b Level of receptivity to real statements

^c Dummy variable (0 = annual report context, 1 = general context)

4.8. Hypothesis summary

In summary, enough empirical support was not found to fully support the six generated hypotheses. However, several significant correlations and relationships were found, resulting in some hypotheses being partially supported.

Table 12. Summary of hypothesis evaluation

H1	There is no significant difference between the receptivity to pseudo-profound bullshit sustainability statements and real sustainability statements.	Partially empirically supported
H2	Individuals are more receptive to pseudo-profound bullshit sustainability statements that are stated to originate from an annual report, compared to a general business context.	Not empirically supported
H3	High level of cognitive ability is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.	Partially empirically supported
H4	High level of cynicism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.	Not empirically supported
H5	High level of skepticism is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements	Partially empirically supported
H6	High level of perceived knowledge is negatively correlated with receptivity to pseudo-profound bullshit in sustainability statements.	Not empirically supported

4.9. Additional findings

The variable profundity was not included in the main study and is therefore included in additional findings. Firstly, a significant positive correlation was found between profundity and the variables bullshit receptivity and real receptivity (see Table 10). This indicates that respondents who find statements profound, also are generally receptive to the statements. However, the cynicism variable was found to be significantly negatively correlated with profundity but not with receptivity, indicating that highly cynical respondents rated statements less profound but were not significantly less receptive to bullshit or real statements. In addition, cognitive ability was significantly negatively

correlated with bullshit receptivity but not with profundity, indicating that respondents with high cognitive ability were less receptive to bullshit but not necessarily less likely to see the statements as profound. These differences in the results for bullshit receptivity and profundity, indicate possible differences in how profound individuals rate the statements, and their receptivity to bullshit (when measuring bullshit receptivity the way it was measured in this study).

Furthermore, to investigate how the real statements were perceived compared to the bullshit statements, the results from the linear regression were analyzed. Notable results were found for the relationship between cognitive ability and real receptivity (see Table 11). In line with expected results, *increased* cognitive ability resulted in significantly *lower* receptivity to bullshit statements, whilst the opposite results were found for real receptivity. Consequently, the regression analysis showed that *increased* cognitive ability results in *increased* receptivity to real statements.

5. Discussion

The purpose of this study was to investigate which factors influence individuals' receptivity to pseudo-profound bullshit statements regarding sustainability in business communication. To address the aim of the study, the following research questions were constructed; 1) *Are individuals receptive to pseudo-profound bullshit regarding sustainability in business communication?* 2) *To what extent do human and situational factors respectively influence individuals' receptivity to bullshit related to sustainability in business communication?*

Out of six hypotheses, three were partially empirically supported. The results indicate that the receptivity was similar towards pseudo-profound bullshit statements and real statements, as well as that high levels of cognitive ability and skepticism partially contribute to decreased receptivity. Considering these results, further research should investigate if the receptivity towards pseudo-profound bullshit and real statements is as similar when including additional aspects and contexts. Additional research should be made to determine if the factors mentioned above influence individuals' receptivity to bullshit, more than just partially. Moreover, due to the relevance of sustainability as a topic, the authors suggest that the prevalence of pseudo-profound bullshit regarding sustainability in business communication, should be further investigated.

5.1. Conclusions and implications

5.1.1. Pseudo-profound bullshit receptivity

Despite the fact that the bullshit statements were constructed to be similar to the real statements, we expected the respondents to be more receptive to the real statements, which our study did not find. Instead, the respondents were generally more receptive to the bullshit statements. This might be a result of the limited additional information provided and the fact that both types of statements followed a similar structure. It was decided to limit the provided information regarding statement context and origin in order to focus the investigation on how receptivity is influenced by the four chosen human and situational factors.

Compared to previous studies in the field, this study differs in terms of how the statements were presented. For instance, the study by Pennycook et al. (2015) examines statements without specifying where they originate from, which focuses the investigation on the specific bullshit sentence, with no additional external factors affecting the individual's evaluation process. In the present study, we introduced the statements in the context of business communication. The respondents knew that the statements were claims from companies which may have influenced how they evaluated each statement. We assume that preconceptions and perceptions about the company and

the situation play an important role in consumers' receptivity to business communication. However, the decision to exclude this additional information was made in an effort to isolate the effects of the human and situational factors that were investigated. Based on the respondents' comments that additional information was desired in order to judge the statements properly, we speculate that knowing that something is communicated by a company causes the recipient to desire more background information. However, the difference in receptivity was not significant between the group that received additional contextual information and the group that received less contextual information. Therefore, the additional information may have had a limited effect on receptivity. Naturally, this may have influenced the fact that the receptivity mean was centered around the middle value of the scale (= 4), which was the option implying the respondent was "neutral".

5.1.2. Impacts of human factors

The decision to investigate how cognitive ability affects bullshit receptivity was based on previous research on pseudo-profound bullshit (Pennycook et al., 2015; Pennycook & Rand, 2019). These studies found a significant negative correlation between performance on the CRT and bullshit receptivity. However, our study only found a significant negative correlation on an aggregate level. Significant differences in receptivity between those with high cognitive ability and low cognitive ability was found for some pseudo-profound bullshit statements. Therefore, only directional support was found which may imply that a study more closely replicating the previous research could have found significant support. For instance, a seven item CRT as used by Pennycook et al. (2015), could have been used instead of a three item CRT to achieve a better measure of low cognitive ability compared to high cognitive ability.

Cynicism was investigated as a factor that may influence bullshit receptivity based on research by Mohr, Eroglu and Ellen (1998) on the area of skepticism towards environmental claims. Since cynicism is closely related to skepticism, which is a factor discussed in relation to pseudo-profound bullshit, we aimed to expand the current research by also including cynicism as a factor. No significant results were found that supported the expectation that individuals' level of cynicism would affect their receptivity to bullshit. However, since significant results were found for the correlation between level of skepticism and bullshit receptivity it is possible that significant results for how cynicism influences bullshit receptivity could be found in a revised study. A difficulty with accurately measuring individuals' level of cynicism is the potential apprehension towards honestly answering the questions since they can be perceived as quite personal. If a study was conducted with a larger sample size the same obstacle may still arise, however, it would provide a broader spectrum of different levels of cynicism which could be used to create a better divide between low and high cynicism.

5.1.3. Impacts of situational factors

This thesis set out to study pseudo-profound bullshit in sustainability statements, an area that has previously not been researched. Therefore, the investigation of how situational factors influence bullshit receptivity was deemed particularly relevant since they vary depending on context. As with cynicism, research by Mohr, Eroglu and Ellen (1998) inspired the investigation of skepticism as a factor influencing bullshit receptivity. The results of our study partially empirically supported that individuals' level of skepticism influenced their level of bullshit receptivity. However, when assessing these results, it is worth noting that the dependent variable bullshit receptivity and the independent variable skepticism were derived from different sections of the same scale, which may explain the strong correlation that was found between the two variables. This, together with the significant negative correlation between the profundity ratings and skepticism, may indicate that skepticism represents the opposite of being receptive to bullshit and that lack of skepticism represents bullshit receptivity. In order to more accurately evaluate the correlation between the two variables, we suggest that further research investigates skepticism towards green claims in general while using profundity to assess bullshit receptivity towards specific statements.

Mohr, Eroglu and Ellen (1998) stated perceived knowledge as one of the factors influencing skepticism. Since skepticism is largely integrated in our study, both as part of bullshit receptivity and as an independent factor, we decided to include perceived knowledge as one of the independent variables. The results of our study did not empirically support that individuals' level of perceived knowledge influenced their level of bullshit receptivity. Since the rating of perceived knowledge may be based on the respondents' self-image, the effect of objective knowledge within sustainability should be further researched. It is possible that there is a discrepancy between a respondents perceived knowledge and their objective knowledge and that significant correlations could be found between the level of objective knowledge and bullshit receptivity.

5.2. Summary of key findings

The purpose of this study was to investigate which factors influence individuals' receptivity to pseudo-profound bullshit statements related to sustainability in business communication. To conclude the results from this study, we will address the findings using our research questions as a foundation. In our effort to investigate individuals' receptivity to bullshit and to address the first research question, we found receptivity to be higher, in general, for the pseudo-profound bullshit statements than for the real statements. Therefore, the results of our study imply that consumers are receptive to pseudo-profound bullshit. Our second research question aimed to investigate what drives this receptivity. Regarding the effect of human factors, we found that cognitive ability exhibits a tendency to affect differences in bullshit receptivity, while cynicism

only appears to have a limited effect on differences in bullshit receptivity. For situational factors, we found that skepticism exhibits a tendency to affect differences in bullshit receptivity, while perceived knowledge only appears to have a limited effect on differences in bullshit receptivity. Therefore, our study finds that human and situational factors have a tendency to affect bullshit receptivity, however, to a limited extent.

5.3. Limitations and suggestions for future research

The data collection was conducted through a survey with a convenience sample of $n = 94$ respondents which cannot eliminate the risk of bias, nor ensure applicability to whole populations (Bryman and Bell, 2015). An increased sample size and a sample more representative of the general population would have made the results more generalizable. Therefore, this should be considered in future research. However, we speculate that the sample size in this study was limited due to the length of the survey since adding the incomplete answers would have contributed to an increased sample size of 43%. The survey length was discussed before distribution which resulted in the survey only including a total of four bullshit statements and four real statements. If the survey would have included a higher number of statements, the results might have shown greater differences between the statements. Another aspect that might have had an impact on the results compared to previous studies is the translation of the questions and scales used to investigate the variables. However, in order to ensure that the scales were easy to comprehend, translation to Swedish was deemed necessary.

The authors suggest that the research on pseudo-profound bullshit in relation to sustainability should be expanded. Additional studies regarding pseudo-profound bullshit in sustainability claims from companies as well as politicians could contribute to informing the public of its prevalence and how to detect it. This could in turn result in greater pressure being put on policy makers in the ongoing climate debate. In addition to the current topic of sustainability, future research should explore new areas where bullshit may emerge. Considering the increasing technological advancements, one such area is artificial intelligence. Since bullshit is created without concern for the truth it implies that consciousness is needed to form such a concern, something that artificial intelligence is lacking. As such, it is an interesting area to further explore.

During an era of fake news and conspiracy theories, bullshit is unfortunately a widespread and growing topic, worth discussing further. In order to stand out in a public landscape filled with deception and questionable information, companies need to be transparent. Therefore, companies with actual sustainable businesses need to clearly distinguish their statements from bullshit by matching their words with actions.

Final words

Considering that bullshit has been deemed to be one of the most salient features of our time, the prevalence of the concept in business communication is unavoidable. Therefore, we urge consumers to be aware, since bullshit may be everywhere.

6. References

- Anson, R. H., Dale Mann, J., & Sherman, D. (1986). Niederhoffer's cynicism scale: Reliability and beyond. *Journal of Criminal Justice*, 14(4), 295-305.
doi:10.1016/0047-2352(86)90123-6
- Ball, C., Burt, G., De Vries, F., & MacEachern, E. (2018). How environmental protection agencies can promote eco-innovation: The prospect of voluntary reciprocal legitimacy. *Technological Forecasting and Social Change*, 129, 242-253.
doi:https://doi-org.ez.hhs.se/10.1016/j.techfore.2017.11.004
- Bialek, M., & Pennycook, G. (2018). The cognitive reflection test is robust to multiple exposures. *Behavior Research Methods; Behav Res Methods*, 50(5), 1953-1959.
doi:10.3758/s13428-017-0963-x
- Bryman, A., & Bell, E. (2015). *Business research methods* (4. ed.). Oxford: Oxford Univ. Press
- Christensen, L. T., Kärreman, D., & Rasche, A. (2019). Bullshit and organization studies. *Organization Studies*, 40(10), 1587-1600. doi:10.1177/0170840618820072
- Churchill, G. A. (1999). *Marketing research: Methodological foundations* (7th ed.). Fort Worth: Dryden Press.
- Cohen, D. S. (1991). The regulation of green advertising: The state, the market and the environmental good. *University of British Columbia Law Review*, 25(2), 225.
- Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing*, 17(6), 411-2. Retrieved from <https://www.proquest.com/scholarly-journals/pilot-studies/docview/230525260/se-2?accountid=39039>
- Coop. (2021). Sveriges grönaste varumärke 2020. Retrieved 2021 March 5 from <https://www.coop.se/vart-ansvar/hallbarhetsarbete/ekologiskt/sveriges-gronaste-varumärke-2020/>
- Dahl, R. (2010). Greenwashing: Do you know what you're buying? *Environmental Health Perspectives*, 118(6), A246-A252.
- Dalton, C. (2016). Bullshit for you; transcendence for me. A commentary on "on the reception and detection of pseudo-profound bullshit". *Judgment and Decision Making*, 11(1), 121-122. Retrieved from <https://search.proquest.com/scholarly-journals/bullshit-you-transcendence-me-commentary-on/docview/1762586613/se-2?accountid=39039>
- De Neys, W. (2014). Conflict detection, dual processes, and logical intuitions: Some clarifications. *Thinking & Reasoning*, 20(2), 169-187.
doi:10.1080/13546783.2013.854725
- Ellen, Scholder, P., Eroglu, D., & Webb, D. (1997), Consumer Judgments in a Changing Information Environment: How Consumers Respond to 'Green Marketing' Claims," *Working Paper*. Georgia State University.
- Fjallraven. (2021). Hållbarhet. Retrieved 2021 March 5 from <https://www.fjallraven.com/se/sv-se/om-oss/hallbarhet>
- Frankfurt, H. G. (2005) *On Bullshit*. Cambridge: Cambridge University Press.

- Frederick, S. (2005). Cognitive reflection and decision making. *The Journal of Economic Perspectives*, 19(4), 25-42. doi:10.1257/089533005775196732
- Gligorić, V., & Vilotijević, A. (2020). "Who said it?" how contextual information influences perceived profundity of meaningful quotes and pseudo-profound bullshit. *Applied Cognitive Psychology*, 34(2), 535-542. doi:10.1002/acp.3626
- Goh, S. K., & Balaji, M. S. (2016). Linking green skepticism to green purchase behavior. *Journal of Cleaner Production*, 131, 629-638. doi:10.1016/j.jclepro.2016.04.122
- Graffeo, M., Polonio, L., & Bonini, N. (2015). Individual differences in competent consumer choice: The role of cognitive reflection and numeracy skills. *Frontiers in Psychology; Front Psychol*, 6, 844. doi:10.3389/fpsyg.2015.00844
- IKEA. (2021). Hållbarhet och vår People & Planet Positive strategi. Retrieved 2021 March 5 from <https://www.ikea.com/se/sv/this-is-ikea/sustainable-everyday/>
- Kanter, D., & Mirvis, P. (1989). *Cynical Americans: Living and Working in an Age of Discontent and Disillusionment*. Jossey-Bass Publishers.
- Kusev, P., Uller, C., Peters, E., Pennycook, G., Pennycook, G., & Ross, R. M. (2016). *A section of the journal frontiers in psychology commentary: Cognitive reflection vs. calculation in decision making*
- Mirvis, P. H., & Kanter, D. L. (1989). Combatting cynicism in the workplace. *National Productivity Review*, 8(4), 377. Retrieved from <https://www.proquest.com/trade-journals/combating-cynicism-workplace/docview/215026126/se-2?accountid=39039>
- MOHR, L. A., EROĞLU, D., & ELLEN, P. S. (1998). The development and testing of a measure of skepticism toward environmental claims in marketers' communications. *The Journal of Consumer Affairs; Journal of Consumer Affairs*, 32(1), 30-55. doi:10.1111/j.1745-6606.1998.tb00399.x
- Nilsson, A., Erlandsson, A., & Västfjäll, D. (2019). The complex relation between receptivity to pseudo-profound bullshit and political ideology. *Personality & Social Psychology Bulletin; Pers Soc Psychol Bull*, 45(10), 1440-1454. doi:10.1177/0146167219830415
- Obermiller, C., & Spangenberg, E. R. (1998). Development of a scale to measure consumer skepticism toward advertising. *Journal of Consumer Psychology*, 7(2), 159-186. doi:10.1207/s15327663jcp0702_03
- Pennycook, G., Cheyne, J. A., Barr, N., Koehler, D. J., & Fugelsang, J. A. (2015). On the reception and detection of pseudo-profound bullshit. *Judgment and Decision Making*, 10(6), 549-563. Retrieved from <https://www-proquest-com.ez.hhs.se/scholarly-journals/on-reception-detection-pseudo-profound-bullshit/docview/1739211836/se-2?accountid=39039>
- Pennycook, G., Cheyne, J. A., Barr, N., Koehler, D. J., & Fugelsang, J. A. (2016). It's still bullshit: Reply to dalton (2016). *Judgment and Decision Making*, 11(1), 123-125. Retrieved from <https://search.proquest.com/scholarly-journals/still-bullshit-reply-dalton-2016/docview/1762586675/se-2?accountid=39039>

- Pennycook, G., Fugelsang, J. A., & Koehler, D. J. (2015). What makes us think? A three-stage dual-process model of analytic engagement. *Cognitive Psychology*, 80, 34-72. doi:<https://doi.org/10.1016/j.cogpsych.2015.05.001>
- Pennycook, G., & Rand, D. G. (2019). *Who falls for fake news? the roles of bullshit receptivity, overclaiming, familiarity, and analytic thinking* Wiley. doi:10.1111/jopy.12476
- Pennycook, G., & Ross, R. M. (2016). A section of the journal *frontiers in psychology* commentary: *Cognitive reflection vs. calculation in decision making*
- Petrocelli, J. V. (2018). Antecedents of bullshitting. *Journal of Experimental Social Psychology*, 76, 249-258. doi:<https://doi-org.ez.hhs.se/10.1016/j.jesp.2018.03.004>
- Pfattheicher, S., & Schindler, S. (2016). Misperceiving bullshit as profound is associated with favorable views of cruz, rubio, trump and conservatism. *PloS One*, 11(4), e0153419. doi:10.1371/journal.pone.0153419
- Stanovich, K. E. (2018b). Miserliness in human cognition: The interaction of detection, override and mindware. *Thinking & Reasoning*, 24(4), 423-444. doi:10.1080/13546783.2018.1459314
- Stevenson, H. (2021). Reforming global climate governance in an age of bullshit. *Null*, 18(1), 86-102. doi:10.1080/14747731.2020.1774315
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management.the Academy of Management Review*, 20(3), 571. Retrieved from <https://www-proquest-com.ez.hhs.se/scholarly-journals/managing-legitimacy-strategic-institutional/docview/210941848/se-2?accountid=39039>
- Sustainable Brand Index, 2021. *Official Report 2021*. Sustainable Brand Index, p.38.
- Svensk handel. (2019). Svensk handels hållbarhetsundersökning 2019., 4. Retrieved from Svensk handel. (2019). Svensk handels hållbarhetsundersökning 2019. <https://www.svenskhandel.se/globalassets/dokument/aktuellt-och-opinion/rapporter-och-foldrar/hallbar-handel/svensk-handels-hallbarhetsundersokning-2019.pdf>
- Systembolaget. (2021). Hållbarhet | Systembolaget. Retrieved 2021 March 5 from <https://www.omsystembolaget.se/hallbarhet/>.
- Tan, S. J. (2002). Can consumers' scepticism be mitigated by claim objectivity and claim extremity? *Journal of Marketing Communications*, 8(1), 45-64. doi:10.1080/13527260210122097
- Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science*, 359(6380), 1146-1151. doi:10.1126/science.aap9559

7. Appendices

7.1. Appendix A

Table 1. Summary of Cronbach's alpha for the dependent and independent variables

Variable	Cronbach's alpha	<i>n</i>	<i>M</i>	<i>SD</i>	Number of items
Receptivity					
Bullshit 1*	0.75	46	12.39	2.79	3
Bullshit 2*	0.83	46	13.11	3.09	3
Bullshit 3*	0.81	48	11.52	3.48	3
Bullshit 4*	0.76	47	12.17	2.88	3
Real 1*	0.74	46	9.61	3.19	3
Real 2*	0.79	46	11.93	3.24	3
Real 3*	0.69	48	12.69	3.00	3
Real 4*	0.84	48	11.17	3.56	3
Skepticism					
Bullshit 1*	0.74	46	25.48	6.78	7
Bullshit 2*	0.79	46	23.17	7.41	7
Bullshit 3*	0.85	48	27.46	8.80	7
Bullshit 4*	0.86	48	24.81	8.61	7
Real 1*	0.76	46	30.72	7.70	7
Real 2*	0.86	46	24.57	8.09	7
Real 3*	0.86	48	23.33	8.06	7
Real 4*	0.90	48	27.06	9.63	7
Cognitive ability**	0.73	94	1.88	1.13	3
Cynicism*	0.78	94	19.90	6.09	6
Perc. knowledge*	0.75	94	28.71	5.01	6

Note: *7-point Likert scale, **The three questions generated a correct or incorrect answer which were computed into a score ranging from 0-1 which corresponded with the percent of correct answers the respondent had given to the questions.

Bullshit 1 = "For a greener Sweden", Bullshit 2 = "We work for a sustainable planet", Bullshit 3 = "We fight for a CO2-neutral world", Bullshit 4 = "For a sustainable climate", Real 1 = "Sweden's greenest brand", Real 2 = "Better for people + our planet", Real 3 = "We want to set an example within sustainability", Real 4 = "Develop & manufacture on nature's terms"

Table 2. Mean receptivity per statement and context group

Receptivity	<i>n</i>	<i>M</i>	<i>SD</i>
Context: general			
Bullshit 1	24	4.28	0.88
Bullshit 2	24	4.50	1.09
Bullshit 3	23	4.04	1.02
Bullshit 4	23	3.82	1.15
Real 1	24	3.21	1.12
Real 2	24	4.13	0.99
Real 3	23	4.28	1.16
Real 4	23	3.62	1.29
Context: annual report			
Bullshit 1	22	3.97	0.96
Bullshit 2	22	4.23	0.96
Bullshit 3	25	3.65	1.27
Bullshit 4	24	4.28	0.68
Real 1	22	3.20	1.02
Real 2	22	3.82	1.17
Real 3	25	4.19	0.81
Real 4	25	3.81	1.10
Aggregate level			
Bullshit statements	94	3.79	0.88
Real statements	94	4.10	0.86

Note: Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO2-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

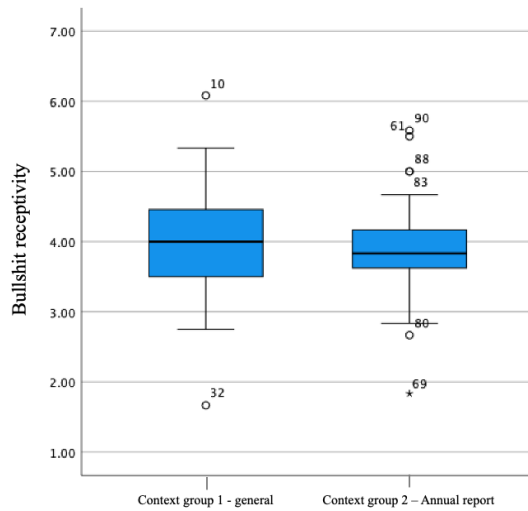


Figure 1. Boxplot of bullshit receptivity for context group 1 and 2

Table 3. Independent sample t-test – effects of cognitive ability on receptivity

	Low CRT			High CRT			<i>df</i>	t	<i>p</i>
Receptivity	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Context - general									
Bullshit 1	13	4.23	1.02	11	4.33	0.74	22	-0.28	.785
Bullshit 2	13	4.95	1.00	11	3.97	0.98	22	2.41	.025*
Bullshit 3	13	4.50	0.79	10	3.47	1.02	21	2.71	.013*
Bullshit 4	13	4.36	0.82	10	3.13	1.18	21	2.94	.008*
Real 1	13	3.00	1.19	11	3.45	1.03	22	-0.99	.335
Real 2	13	4.10	1.15	11	4.15	0.81	22	-0.18	.907
Real 3	13	4.41	0.97	10	4.10	1.41	21	0.63	.538
Real 4	13	3.77	1.22	10	3.43	1.41	21	0.61	.548
Context – annual report									
Bullshit 1	14	4.00	1.14	8	3.92	0.58	20	0.19	.851
Bullshit 2	14	4.36	1.04	8	4.00	0.84	20	0.83	.418
Bullshit 3	14	3.93	0.98	11	3.30	1.54	23	1.23	.229
Bullshit 4	13	4.13	0.78	11	4.45	0.54	22	-1.17	.254
Real 1	14	3.21	0.99	8	3.17	1.14	20	0.10	.919
Real 2	14	3.60	1.34	8	4.20	0.71	20	-1.19	.247
Real 3	14	3.97	0.93	11	4.45	0.54	23	-1.50	.147
Real 4	14	3.81	1.09	11	3.82	1.17	23	-0.02	.985

Note: * $p < 0.05$

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO₂-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

Table 4. Independent sample t-test – effects of cynicism on receptivity

	<u>Low cynicism</u>			<u>High cynicism</u>			<i>df</i>	t	<i>p</i>
Receptivity	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Context - general									
Bullshit 1	13	4.23	0.97	11	4.33	0.83	22	-0.28	.785
Bullshit 2	13	4.28	1.06	11	4.76	1.12	22	-1.06	.297
Bullshit3	12	4.06	1.24	11	4.03	0.77	21	0.06	.954
Bullshit 4	12	4.17	1.06	11	3.45	1.18	21	1.53	.141
Real 1	13	3.05	1.34	11	3.39	0.83	22	-0.77	.453
Real 2	13	4.44	0.97	11	3.76	0.92	22	1.75	.094
Real 3	12	4.36	0.97	11	4.18	1.39	21	0.06	.721
Real 4	12	3.50	1.37	11	3.76	1.24	21	-0.47	.643
Context – annual report									
Bullshit 1	10	3.50	0.97	12	4.36	0.80	20	-2.29	.033*
Bullshit 2	10	3.80	0.71	12	4.58	1.04	20	-2.03	.056
Bullshit 3	12	3.69	1.44	13	3.62	1.15	23	0.15	.880
Bullshit 4	11	4.42	0.67	13	4.15	0.70	22	0.96	.347
Real 1	10	3.20	1.01	12	3.19	1.08	20	0.01	.990
Real 2	10	3.63	1.21	12	3.97	1.17	20	-0.67	.513
Real 3	12	4.22	0.95	13	4.15	0.70	23	0.21	.838
Real 4	12	4.11	1.14	13	3.54	1.03	23	1.32	.200

Note: $p < 0.05$

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO2-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

Table 5. Independent sample t-test – effects of perceived knowledge on receptivity

	<u>Low perc.knowledge</u>			<u>High perc.knowledge</u>			<i>df</i>	t	<i>p</i>
Receptivity	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Context - general									
Bullshit 1	10	4.30	0.66	14	4.26	1.05	22	0.10	.920
Bullshit 2	10	4.03	1.00	14	4.83	0.98	22	-1.86	.075
Bullshit 3	10	4.50	0.93	13	3.47	1.10	21	0.29	.821
Bullshit 4	10	4.10	0.75	13	4.00	1.21	21	-1.20	.242
Real 1	10	3.40	0.87	14	3.07	1.28	22	0.70	.493
Real 2	10	4.03	1.09	14	4.20	0.87	22	-0.37	.710
Real 3	10	3.93	1.30	13	4.54	1.01	21	-1.25	.224
Real 4	10	3.40	1.46	13	3.79	1.17	21	-0.72	.479
Context – annual report									
Bullshit 1	10	4.00	0.73	12	3.94	1.15	20	0.13	.897
Bullshit 2	10	4.10	0.70	12	4.33	1.16	20	-0.55	.586
Bullshit 3	14	3.55	1.19	11	3.78	1.41	23	-0.46	.649
Bullshit 4	14	4.21	0.60	11	4.36	0.79	22	-0.56	.584
Real 1	10	3.30	0.82	12	3.11	1.19	20	0.42	.677
Real 2	10	3.53	0.71	12	4.05	1.44	20	-1.04	.309
Real 3	14	4.05	0.83	11	4.36	0.79	23	-0.96	.334
Real 4	14	3.57	0.98	11	4.12	1.21	23	-1.25	.224

Note: *p<0.05

Bullshit 1 = “For a greener Sweden”, Bullshit 2 = “We work for a sustainable planet”, Bullshit 3 = “We fight for a CO2-neutral world”, Bullshit 4 = “For a sustainable climate”, Real 1 = “Sweden’s greenest brand”, Real 2 = “Better for people + our planet”, Real 3 = “We want to set an example within sustainability”, Real 4 = “Develop & manufacture on nature’s terms”

Models for Linear Regressions of dependent variables

Model 1: Bullshit receptivity = $\beta_0 + \beta_1$ Real receptivity + β_2 Cognitive ability + β_3 Cynicism + β_4 Skepticism + β_5 Perceived knowledge + β_6 Context + u_i

Model 2: Real receptivity = $\beta_0 + \beta_1$ Bullshit receptivity + β_2 Cognitive ability + β_3 Cynicism + β_4 Skepticism + β_5 Perceived knowledge + β_6 Context + u_i

Table 6. Data quality - Judgement of survey

	No, absolutely not	No, not for the most part	Doubtful	Yes, for the most part	Yes, absolutely
Were the questions formulated clearly?	1.1%	5.3%	4.3%	69.1%	20.2%
Were the questions easy to answer?	0%	23.4%	9.6%	48.9%	18.1%
Did you feel that the questions tried to influence your answers in any direction?	42.6%	42.6%	10.6%	3.2%	1.1%

7.2. Appendix B

Start

Hur uppfattar du uttalanden kring hållbarhet från företag & organisationer?

Hej och välkommen att delta i vår enkätundersökning, kul att du har hittat hit! Undersökningen ingår i datainsamlingen för vår kandidatuppsats vid Handelshögskolan i Stockholm, och syftar till att samla in kunskap om hur temat hållbarhet uppfattas i uttalanden från företag och organisationer.

Det tar omkring 15 minuter att genomföra enkäten. Vi ber dig att inte fundera alltför länge på frågorna, och om någon fråga verkar svår att besvara, försök ändå, för alla svar är av intresse. Vissa frågor kan påminna om varandra och finns med av undersökningstekniska skäl, svara därför på frågorna utan att titta tillbaka eller minnas tidigare svar. Alla svar kommer behandlas konfidentiellt.

Genom att genomföra enkäten, hjälper du inte bara oss, utan även vår planet. För varje svar skänker vi **2 kr till Världsnaturfonden (WWF)** som jobbar mot en mer välmående miljö, både i Sverige och globalt.

Vid frågor om webbenkäten eller studien, tveka inte att kontakta oss via email: 24322@student.hhs.se

Stort tack på förhand för din medverkan!

Julia Sandblom, BSc student, Handelshögskolan i Stockholm

Vera Strömbäck, BSc student, Handelshögskolan i Stockholm

Projekt: Kandidatuppsats i Marknadsföring

År och termin: 2021, Vårterminen

Studenter ansvariga för studien: Julia Sandblom, BSc student (24468@student.hhs.se) och Vera Strömbäck, BSc student (24322@student.hhs.se)

Handledare och ansvarig utgivare: Patric Andersson, Associate Professor, Department of Marketing and Strategy

Kontaktuppgifter handledare: Patric.Andersson@hhs.se

Dessa personliga uppgifter kommer behandlas av dig som svarar: Kön, ålder, sysselsättning

All information behandlas efter ramverket GDPR. Vänligen läs informationen nedan.

Information regarding GDPR

As an integral part of the educational program at the Stockholm School of Economics, enrolled students complete an individual thesis. This work is sometimes based upon surveys and interviews connected to the subject. Participation is naturally entirely voluntary, and this text is intended to provide you with necessary information that may concern your participation in the study or interview. You can at any time withdraw your consent and your data will thereafter be permanently erased.

Confidentiality. Anything you say or state in the survey or to the interviewers will be held strictly confidential and will only be made available to supervisors, tutors and the course management team.

Secured storage of data. All data will be stored and processed safely by the SSE and will be permanently deleted when the project is completed.

No personal data will be published. The thesis written by the students will not contain any information that may identify you as a participant to the survey or interview subject.

Your rights under GDPR. You are welcome to visit <https://www.hhs.se/en/about-us/data-protection/> in order read more and obtain information on your rights related to personal data.

- ☐ Ja, jag har tagit del av informationen ovan och samtycker till att delta i denna studie.
- ☐ Nej, jag samtycker inte till att delta i denna studie.

Vänligen skriv dina initialer som signatur till frågan om du valde alternativet:

Jag har tagit del av informationen ovan och samtycker till att delta i denna studie.

Generell

Då startar vi! Du kommer nu att få se 4 stycken uttalanden från svenska företag/organisationer. Dessa har kommunicerats i syfte att beskriva organisationernas arbete inom hållbarhet.

Vänligen studera följande uttalanden noga. Du kommer sedan få frågor om vad du tycker om dem.

Årsredovisning

Då startar vi! Du kommer nu att få se 4 stycken uttalanden från svenska företag/organisationer. Dessa har kommunicerats via respektive organisations senaste årsredovisning, i avsnittet om deras

hållbarhetsarbete.

Vänligen studera följande uttalanden noga. Du kommer sedan få frågor om vad du tycker om dem.

Uttalanden 1

"För ett grönare Sverige"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilsledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

"Sveriges grönaste varumärke"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

"Bättre för människor + vår planet"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilseledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilseledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

"Vi jobbar för en hållbar planet"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilseledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐

Uttalanden 2

"Vi vill vara ett föredöme inom hållbarhet"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilseledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

"Vi kämpar för en CO2-neutral värld"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
--	------------------------	-------------------------------------	-------------------------------------	---------	-----------------------------------	-----------------------------------	-------------------

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilseledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

"Utveckla & tillverka på naturens villkor"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilseledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

"För ett hållbart klimat"

- Uttalande från företag/organisation

Baserat på din uppfattning av uttalandet ovan, vänligen ange i vilken grad du instämmer med följande påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Neutral	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
Uttalandet är vilseledande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är missvisande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är trovärdigt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är sant	☐	☐	☐	☐	☐	☐	☐
Uttalandet gör mig misstänksam gällande dess sanningshalt	☐	☐	☐	☐	☐	☐	☐
Uttalandet skildrar en realistisk situation	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte insiktsfullt	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte övertygande	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte meningsfullt för mig	☐	☐	☐	☐	☐	☐	☐
Uttalandet är inte lätt att förstå	☐	☐	☐	☐	☐	☐	☐
Uttalandet kan inte tolkas med enkelhet	☐	☐	☐	☐	☐	☐	☐

Övriga frågor

Nedan följer ett par påståenden om ditt intresse för hållbarhet. Vänligen ange i vilken grad dessa stämmer in på dig.

	Stämmer inte alls	Stämmer i mycket liten grad	Stämmer i ganska liten grad	Osäker/Vet ej	Stämmer i ganska hög grad	Stämmer i mycket hög grad	Stämmer helt
Jag vet att jag köper produkter som är miljövänliga	☐	☐	☐	☐	☐	☐	☐
Jag vet mer om återvinning än den genomsnittliga personen	☐	☐	☐	☐	☐	☐	☐
Jag vet hur jag ska välja produkter och förpackningar för att minska mängden avfall som ej är återvinningsbart	☐	☐	☐	☐	☐	☐	☐
Jag förstår miljörelaterade texter och symboler som finns på produkter	☐	☐	☐	☐	☐	☐	☐
Jag vet hur jag ska sortera mina återvinningsbara produkter	☐	☐	☐	☐	☐	☐	☐
Jag är kunnig när det kommer till klimatfrågor	☐	☐	☐	☐	☐	☐	☐
Det är viktigt att du är uppmärksam på frågorna. Vänligen välj alternativet "Stämmer inte alls"	☐	☐	☐	☐	☐	☐	☐

Följande fråga kan upplevas avvika från forskningsområdet och uppfattas som känslig, men den ger värdefull och förklarande data för vår uppsats. Därför uppskattar vi om du svarar så ärligt som möjligt.

Vi påminner om att ingen insamlad data kan härledas till dig, datan hanteras konfidentiellt och kommer inte att sparas.

Människan har levt tillsammans i århundraden. Hur ser du på dina medmänniskor?

Vänligen ange i vilken grad du instämmer med dessa påståenden.

Vänligen ange i vilken grad du instämmer med dessa påståenden.

	Instämmer inte alls	Instämmer i mycket liten grad	Instämmer i ganska liten grad	Osäker/Vet ej	Instämmer i ganska hög grad	Instämmer i mycket hög grad	Instämmer helt
De flesta skulle berätta en lögn om de kan tjäna på det	☐	☐	☐	☐	☐	☐	☐
Människor låtsas bry sig mer om varandra än de faktiskt gör	☐	☐	☐	☐	☐	☐	☐
Det är patetiskt att se osjälviska människor i dagens samhälle eftersom de blir utnyttjade	☐	☐	☐	☐	☐	☐	☐
De flesta agerar endast i sitt eget intresse	☐	☐	☐	☐	☐	☐	☐
De flesta tycker egentligen inte om att sträcka ut en hand för att hjälpa andra	☐	☐	☐	☐	☐	☐	☐
De flesta är inte ärliga av naturen	☐	☐	☐	☐	☐	☐	☐

Nedan följer tre kortare frågor som kan upplevas avvika från forskningsområdet men som ger värdefull data till vår undersökning. Vänligen svara så gott du kan.

Om det tar 5 maskiner, 5 minuter att tillverka 5 produkter. Hur lång tid tar det för 100 maskiner att tillverka 100 produkter?

 minuter

En juice och ett sugrör kostar tillsammans \$1.10. Juicen kostar \$1.00 mer än sugröret. Hur mycket kostar sugröret?

 cent

I en sjö, finns ett fält med näckrosor. Varje dag fördubblas fältets storlek. Om det tar 48 dygn för fältet att täcka hela sjön, hur lång tid skulle det ta för sjön att bli täckt till hälften?

 dygn

Om du kände igen ett/flera av uttalandena i början på undersökningen, vänligen ange vilket/vilka företag du förknippar det med.

Nu är det inte mycket kvar. Nedan följer ett par demografiska frågor.

Vänligen ange ditt kön.

- ☐ Kvinna
- ☐ Man
- ☐ Icke-binär
- ☐ Annat
- ☐ Vill ej ange

Vänligen ange ditt födelseår.

Vilken är din huvudsakliga sysselsättning?

- ☐ Studerar
- ☐ Arbetar
- ☐ Tjänstledig
- ☐ Arbetslös
- ☐ Pensionär
- ☐ Annat

Arbetar du med CSR eller hållbarhetsfrågor?

- ☐ Ja
- ☐ Nej

Avslutningsvis ber vi dig att besvara följande frågor om undersökningen och enkätens utformning.

	Nej, absolut inte	Nej, i stort sett inte	Osäker/Vet ej	Ja, i stort sett	Ja, absolut
Var frågorna tydligt formulerade?	☐	☐	☐	☐	☐
Var frågorna lätta att besvara?	☐	☐	☐	☐	☐
Kände du att frågorna försökte påverka dina svar i någon riktning?	☐	☐	☐	☐	☐
Undersöker den här enkäten uppfattningar kring uttalanden gällande hållbarhet?	☐	☐	☐	☐	☐
Undersöker den här enkäten uppfattningar kring träningsvanor?	☐	☐	☐	☐	☐

Vänligen fyll i om du har några övriga kommentarer gällande undersökningen och enkätens utformning.

Powered by Qualtrics

The Cognitive Reflection Test (CRT)

- (1) A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball.
How much does the ball cost? _____ cents
- (2) If it takes 5 machines 5 minutes to make 5 widgets, how long would it take
100 machines to make 100 widgets? _____ minutes
- (3) In a lake, there is a patch of lily pads. Every day, the patch doubles in size.
If it takes 48 days for the patch to cover the entire lake, how long would it
take for the patch to cover half of the lake? _____ days

Perceived Knowledge

I know that I buy products and packages that are environmentally safe.

I know more about recycling than the average person.

I know how to select products and packages that reduce the amount of waste ending up in landfills.

I understand the environmental phrases and symbols on product packages.

I am confident that I know how to sort my recyclables properly.

I am very knowledgeable about environmental issues.

Cynicism Scale

Most people will tell a lie if they can gain by it.

People pretend to care more about one another than they really do.

It's pathetic to see an unselfish person in today's world because so many people take advantage of him or her.

Most people are just out for themselves.

Most people inwardly dislike putting themselves out to help other people.

Most people are not really honest by nature.

Disbelief

- This advertising claim is true (reverse scored)
- I am sceptical about the truth of this advertising claim
- This advertising claim is believable (reverse scored)

Mistrust

- This advertising claim is deceptive
- This advertising claim is misleading
- This advertising claim is not convincing
- This is not an intelligent advertising claim
- This advertising claim is not meaningful to me
- This advertising claim does not portray a realistic situation

Undesirable

- This advertisement appears dull
- This advertisement appears unprofessional
- This advertisement is uninteresting
- This advertisement is not sophisticated
- This advertisement is not worth remembering

Misinform

- Advertisers often exaggerate the claims made about their products
- This advertisement is not informative
- Advertising does not tell much useful information about products
- Advertisements tell only the good things about products
- This advertisement cannot be easily understood
- This advertisement cannot be easily interpreted
- The arguments in this advertisement are not coherent

```
import random

förstaord = ['För', 'Vi']
räkneord = ['en', 'ett']
adjektiv = ['grönare', 'bättre', 'hållbar', 'ljusare', 'klimatpositiv', 'CO2-neutral']
substantiv = ['värld', 'planet', 'samhälle', 'tillvaro', 'framtid', 'miljö', 'klimat', 'Sverige']
verb = ['jobbar', 'verkar', 'finns', 'strävar', 'kämpar']
konjunktion = ['för']

from random import randint

slumpa = random.randint(0, 1)

if förstaord[slumpa] == 'För':
    print(förstaord[slumpa], random.choice(räkneord), random.choice(adjektiv), random.choice(substantiv))
elif förstaord[slumpa] == 'Vi':
    print(förstaord[slumpa], random.choice(verb), random.choice(konjunktion), random.choice(räkneord), random.choice(adjektiv), random.choice(substantiv))
```