The Power of Likeability

Antal tegn: 168.555
Svarende til antal normalsider: 70,2

Peter Møller Jensen
Studienummer: 20143357

Mads Hyldig
Studienummer: 20143370

Vejleder: Brady Wagoner

Kandidatspeciale, 29. maj, 2020
Aalborg Universitet

Abstract

This paper presents an original framework for how one can be protected against the power of likeability in order to avoid persuasion. Persuasion is a heavily researched topic, and likeability is known to be one of the most dominant traits leading to persuasion. However, a framework for how one can seek *protection* from likeability has not yet been proposed. The paper takes the reader through the most dominant research inside the field of likeability. It shows which traits likeability is made up of, as well as how these traits affect people's information processing. Variables which affect information processing in relation to likeability and persuasion, such as personal differences, environment, and culture are also presented.

The framework is concluded to be impractical, which ultimately results in a proposal of the "SHIRT" framework. It consists of five easy accessible questions designed to be a practical version of the original framework. These include: *Do we wear the same clothes?*; *Is this person hot (physically attractive)?*; *Do I have continuous interaction with the brand?*; *Did I receive a gift or compliment?*; *Does the brand treat me like im favoured and high priority?* Even though the SHIRT framework is rooted in validated research, it is acknowledged that it is a theoretical model, which needs further validation. A proposal for how the framework can be tested in an experiment is included in the Annex.

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Introduction

"*How likeable every 2020 presidential candidate is, ranked*" was the headline in a 2019 Business Insider article, where each candidate is ranked based on likeability.

The list was used to predict who will win the presidency. In other words, the most *likeable* candidate will become one of the most powerful men/women on the planet. Why in the world would Business Insider ever base such a crucial decision on something as simple as who is more *likeable*? It seems absurd, considering that we should rather base it on their political standpoint, previous track records, etc.

Is the president of the USA (eg. Trump) really elected based on likeability, and not his competence? Considering the 100's of articles centered around the likeability of presidential candidates (via a quick Google search), the answer might be yes. Consider how dangerous it is then, if a "bad" president candidate is able to manipulate people into thinking he or she is likeable, and thus get elected.
How would he or she use that power? Would it be used for better healthcare? Would it be used for creating a better environment? Would it be used for building a giant wall at the Mexican border?

This introduction could have outlined the bigger picture of why persuasion is relevant in general. However, the field of persuasion has been studied by many before us. And it is no wonder why. Decision making (the overall framework for persuasion) is probably the closest you get to defining the moment between thinking and doing. And in a world where 'doing' is more highly favored than thinking, the study of decision making processes in relation to persuasion thrives.
However, there is a saying that the consumer is more enlightened now than ever before, which in turn should affect the effectiveness of different persuasive tactics. In addition, more laws about (hidden) advertising also play into the favor of the consumer. Instagram for instance, has recently announced that *all* native advertising have to make it clear that it is paid content #ad.

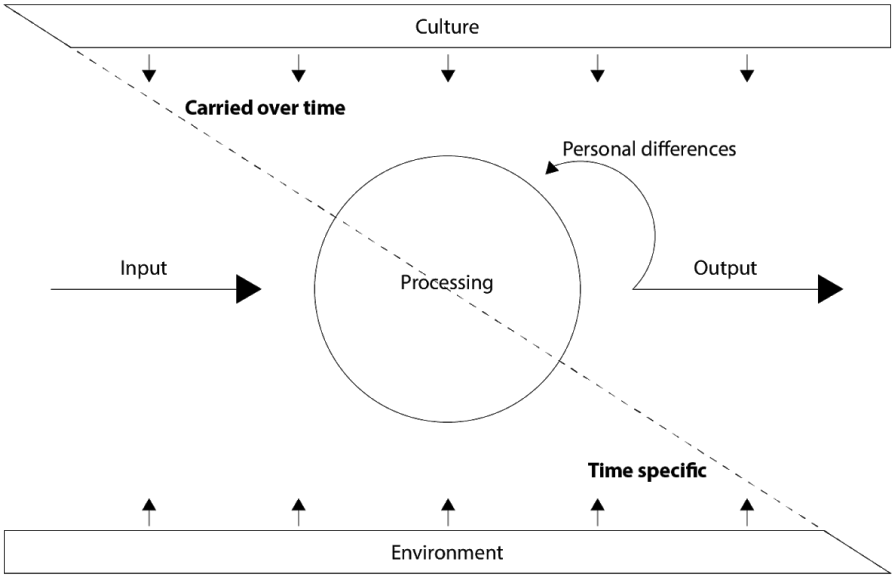
When consumers have (or feel they have) a relation to the communicator who tries to persuade them, it is exactly one of the areas where they are most vulnerable. And in the modern digital era, where brands can *act* as people on social media, humans can also form relations to such brands. These relations will of course either increase or lower the probability of a brand being perceived as likeable by the consumer. Unfortunately, the laws for native advertising do not apply for brands on Instagram. This makes it hard for the consumer to distinguish between what is genuine relationship building, and what is persuasion (ads), making brand communication a grey area.

Studies (Chaiken, S, (1980), Heuristic Versus Systematic Information Processing and the Use of Source Versus Message Cues in Persuasion; Chaiken, S. & Eagly, A. H., (1983), Communication Modality as a Determinant of Persuasion: The Role of Communicator Salience) also show how likeability is the dominating element when it comes to influencing other people, and you would probably agree that it is easier saying 'no' to people you do not like, right? Likeability thus becomes a paradox: You would prefer to meet people you like, but it would also make you more vulnerable to persuasion.
It is due to this paradox that likeability is not only the strongest factor for persuasion, but also the most dangerous one. Yet nobody is teaching us how to protect ourselves against likeable people or brands. Politicians, salesmen, or your boss is therefore potentially able to manipulate you into perceiving them as likeable, and thus persuade you. We therefore present a framework for protecting oneself against the power of likeability in order to make better decisions, and ultimately avoid getting persuaded.

Model presentation

We want people with no prior knowledge of psychological literature to be able to protect themselves against likeability. We believe that an easily accessible and understandable model is the best way of doing so. As Giere (1986) states in regards to new ideas "it is usually best to provide an exemplar which demonstrates, in a particular case, the usefulness of those ideas" (Giere, R. N., (1986), Cognitive Models in the Philosophy of Science). Models are thus a tool for explaining both how and why ideas are useful, and they are able to do so in limited space (See Annex, Making models).

However, not only does our model work as an explanatory tool, it will also serve as a guideline for how this paper is structured and the elements we will be working with. We present two models, model A and model B. Model A explains the overall processes that are involved in decision making in a persuasive context. Model B is the protective framework, which explains how likeability relates to each aspect of model A.



Model of Embedded Processing, Model A

The model above, *Model of Embedded Processing*, consists of six elements: Input, processing, output, personal differences, culture, and environment. The arrows indicate the process of influence. In the following, we will explain the elements and the relationship between them.

Input

The individual receives an input (a message). This input is affected by the physical and social environment surrounding the given situation.

Processing

The information processing is affected by the social and physical environment, personal differences shaped by former experiences, and the cultural context of the individual.

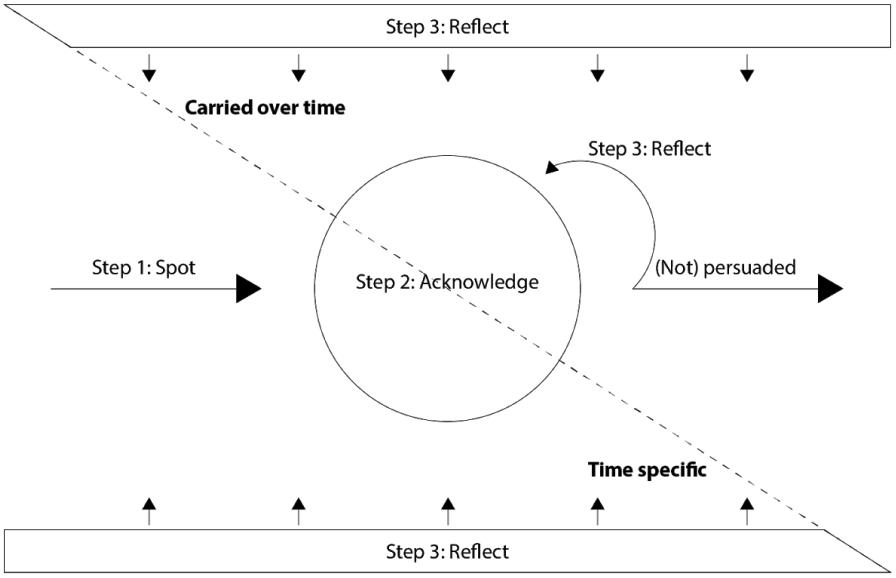
Output

The output is how the individual understands the message and how he/she reacts to it based on the information processing. The output and cultural context (experience) ultimately affect the personal differences that the individual will carry with him/her.

Relationship between components

The individual is the circle in the middle. When an input is received, it is processed, and the output is the result of this processing. This output may be a response to the message. For each time this happens, the individual will get new experience, and since no individuals receive all the same inputs, these experiences will add to the individual's personal differences and preferences, which in turn will affect how they process the next input. You may refer to this as the "byproduct" of the input-processing-output process.

The model is shaped with the belief that one will always be in a cultural and physical environment. Since the input, environment, and part of the processing are restricted to the time of receipt, the model places these elements on the *time specific* side, on the left. On the other hand, the response (and the byproduct of personal differences it creates), the culture in which the individual is embedded, and thus also part of the processing, are all *carried over time*. This means that the effect of the current input will not only affect how the individual will react in this situation, but also in future situations.



Model of Embedded Processing, Model B

Ultimately, we are able to create a protective framework based on the model. Specifically, this means that each of the major elements involved in persuasion in relation to likeability have been converted into protection strategies. This leaves us with three concrete steps that are all crucial for likeability-protection.

Step 1 - Spot

Since the strongest input in a persuasive context is likeability, the first step is learning how to spot the most common likeability traits. Therefore, Step 1 is called Spot.

Step 2 - Acknowledge

The received input can be processed in different ways. It is therefore necessary to acknowledge the common ways humans process information in relation to likeability. Therefore, Step 2 is called Acknowledge.

Step 3 - Reflect

The processing of input changes in relation to the environment and the culture. These elements may not be clearly apparent to the individual, making it crucial to reflect on how they relate to your perception of likeability. Therefore, Step 3 is called Reflect.

Applying the preventive framework

Each step takes the reader through underlying theoretical frameworks and how they relate to likeability. Step 1 uses research to show the reader how powerful likeability is, and what the most common likeability traits are. Step 2 helps the reader understand how information is processed on a general level, as well as how this relates to the power of likeability. Step 3 integrates elements of culture and environment in order to show how these affect the previous mentioned steps.

Each step is concluded with a set of specific questions. If the reader is able to answer "yes" to any of these questions, the probability of persuasion in a likeability context will rise. In other words, the more "yeses" used to answer questions, the more vulnerable you are to be persuaded by likeability.

The power of likeability

As stated above, studies show that likeability works as a strong persuader. This means that the more likeable a person is perceived to be, the more he/she will be able to persuade a person. Imagine that two of your coworkers, who are equally important to you in terms of your work relationship, were asking you for a favor. They both asked you to help them move into their new apartment. Unfortunately, you only have time to help one of them. You would probably be much more likely to choose helping the one you like the most. This is the power of likeability.

Smith & De Houwer (2014) went a step further in terms of showing just how powerful likeability really is. In their study they sought out to investigate whether a college professor would be able to persuade his students into preferring so-called "comprehensive exams". Even though this sounds like a very difficult task, it turned out that it was in fact possible, as long as the professor was perceived as likeable by the students (Smith, C. T., & De Houwer, J., The Impact of Persuasive Messages on IAT Performance is Moderated by Source Attractiveness and Likeability).

Furthermore, likeability also works in an online setting. This was shown in a study conducted by McLaughlin (2016) who showed that that people are persuaded to join an online community based on how much they *like* it. In fact, likeability not only affected how likely

they were to join, but also how likely they were persuaded into reading or posting content in the community, as well as revisiting it regularly (McLaughlin, C., (2016) Source Credibility and Consumers' Responses to Marketer Involvement in Facebook Brand Communities: What Causes Consumers to Engage?).

Knowing that likeability works as a very strong persuader is important, but it is not enough. We believe that one also has to know how to *spot* likeability traits. In order to do so, one therefore has to know what major characteristics define likeability and how these characteristics play out in real life situations. This has led us to define Step 1 by asking the question: *How do you spot likeability?*

Step 1 - How do you spot likeability?

The overall goal of this section is to make the reader able to spot likeability traits. We will use the Reysen Likability Scale to determine how likeability is measured and this information will make the foundation for defining what likeability *is*.

We will take the reader through the major characteristics of likeability, and explain how and why they work. Ultimately, we will provide a set of easily accessible questions which the reader can ask him/herself in order to determine whether he/she finds someone or something likeable.

Reysen Likability Scale

The Reysen Likability Scale is a 7 point Likert-type scale used to measure the likeability of a person (See Annex, The Reysen Likability Scale). The scale was created in order to measure likeability in a more reliable and valid way than previous likeability scales have done (Reysen, S., (2005), Construction of a New Scale: The Reysen Likability Scale).The Reysen Likability Scale is thus a great tool to ask yourself questions in order to investigate whether or not you perceive someone as likeable. The questions in the Reysen Likability Scale may seem trivial and obvious, but some of the more complex questions one can ask him/herself from the scale are: Is this person similar to me? Do I find this person attractive?

In the following we will go in depth with some of the complex traits, *similarity* and *attractiveness*, which according to the Reysen Likability Scale, is believed to create

likeability. Furthermore, we will go through *compliments* and *gifts*, which are also powerful and concrete actions that create likeability.

Similarity

Similarity is one of the most consistent traits in creating likeability, and is therefore very important to understand if you want to protect yourself against the power of likeability. It has been shown to create persuasiveness when it is investigated in relation to likeability (Silvia, P., J., (2005), Deflecting Reactance: The Role of Similarity in Increasing Compliance and Reducing Resistance).

Silvia (2005) showed the effect of similarity in a 2005 study where he manipulated the similarity of the communicator to match the receiver. In other words, they made the subjects perceive that they were similar to a communicator. The results showed that similarity increased likeability significantly, which in turn led to more agreeableness, and ultimately persuasion. The study also showed that even when the communicator acted *violently*, he would *still* be able to create likeability because of the perceived similarity.

Most people have felt similar to another person at some point in their life. This similarity could stem from having the same name, date of birth, or sharing the same values and goals. This is especially visible in small online and offline communities (McLaughlin, C., 2016). Consider for instance how passionate football fans feel similar based on a shared goal (their team winning), which ultimately makes them like each other and dislike the other teams. Sharing values is a complex matter, and it would be tempting to believe that it would be hard to impose having the same values in order to create a false perception of similarity. Nonetheless, it turns out that wearing the same type of clothes is enough to do just that. This perception of similarity may not be due to the clothes itself, but rather the fact that the clothes you wear might give a *cue* on some of your core values (see Step 2 on information processing). In this way, a person wearing a suit at work everyday might feel more similar to another person wearing suits, and less similar to a person wearing a t-shirt at work, which ultimately makes him more/less likeable.

This is also true in a commercial context, as the persuasiveness of similarity in relation to likeability is among the reasons why social proof and influencer marketing work. Having shared values (or things in common) with an influencer makes one feel more similar to this

person, which can in fact contribute to the sender as being perceived as more likeable (Silvia, P., J., 2005).

At the end of Step 1, you will find a protective framework which helps spotting similarity.

Attractiveness:

Attractiveness is another trait that consistently creates likeability. According to Chaiken (1980; 1983), attractiveness consists of different key traits. These are likeability, warmth, and friendliness, meaning that if you *perceive* a person to be either likeable, warm, or friendly you are more likely to find him/her attractive.

Recall that the Reysen Likability Scale defines likeability based on traits such as attractiveness, warmth, and friendliness, meaning that if you perceive someone as attractive, you must also perceive him/her as likeable. In other words, attractiveness and likeability are interdependent. Then, if we find a person to be attractive (that is, warm, friendly, and likeable), we are much more likely to agree with this person (Wachtler, J., Counselman, E., (1980), When Increasing Liking for a Communicator Decreases Opinion Change: An Attribution Analysis of Attractiveness)

Attractiveness also has a physical component. In a review by Eagly et al. (1991, acc. Reysen, S., 2005), it is presented how physically attractive people are rated as being more talented, kind, honest, and intelligent than their less physically attractive peers, and this enhances the likeability of physically attractive people (Chaiken, S., 1980).

Wachtler and Counselman (1980) explains the association between attractiveness and likeability through attribution theory, which is the tendency to associate one positive trait (such as attractiveness), with other positive traits (such as likeability). Ultimately, this can lead to persuasion.

The perception of being attractive might be dependent on personal differences, which makes the trait individualistic. As Chaiken (1980) points out: *"... heuristic information processing may involve the use of relatively general rules developed by individuals through their past experience and observations…* (Chaiken, 1980, p. 753). In other words, we might not perceive attractiveness the same way, which makes it difficult to determine exactly *when* someone is attractive. Culture is another aspect that makes it difficult to fully define what

attractiveness exactly is, as it might vary across cultures. We will elaborate further on these perspectives in Step 3.

The important thing then, is not so much how this key trait can be defined, but rather knowing that it does in fact work as a persuader, and that it activates the attribution theory. A person should therefore be able to know if he/she *perceives* someone to be attractive. We have therefore provided a framework for spotting attractiveness at the end of Step 1.

Compliments and gifts

Even though it might not be possible to be perceived as likeable by everyone, it might still be possible to manipulate people's perception of *how* likeable a person is. That is, going from being perceived as less likeable to being perceived as more likeable.

A convenient strategy is giving people compliments. Most of us like receiving compliments. In fact, we like it so much that we tend to *like* people more, if they give us compliments. A study by Grant et al. (2010, according to Hills, T., (2014, February 13), The Power of a Compliment) showed how compliments not only drastically affects the perceived liking of a person, but also had a direct persuasive effect. They showed that compliments nearly doubled the likelihood of persuading someone into doing you a favor as a result of the increased likeability, whereas those who did not receive a compliment were less likely to do a favor. So the next time someone tells you that you look good in that sweater, just know that you are more likely to be persuaded afterwards.

Another strategy is giving people a gift to manipulate their perception (likeability) of you. Regan (1971) showed in a study that it is possible to give participants a gift and thus manipulate their perception of how attractive (likeable) you are, as well as persuading them into doing a larger favor for you, as a result of the increased likeability (persuasion) (Regan, D., (1971), Effects of a Favor and Liking on Compliance). We have therefore provided the reader with a preventive framework for protection against compliments and gifts at the end of Step 1**.**

The Brand Likeability Scale:

While the Reysen Likability Scale is used for measuring likeability in humans, the brand likeability scale is used for measuring likeability in brands. Like humans, brands can use likeability to create persuasion. It is therefore important to also be able to know when a brand

is likeable.

The Brand Likeability Scale consists of four thematic dimensions, where the dimension "Quality associated with the brand's personality" includes many of the same traits as the Reysen Likability Scale. The Reysen Likability scale thus only covers 1/4th of the Brand Likeability Scale, and therefore, we will now dive deeper into the four main components of the Brand Likeability Scale: Positivity, interaction, personified quality, and contentment (Nguyen, B., Ekinci, Y., Simkin, L. & Melewar T. C., (2015), The brand likeability scale. An exploratory study of likeability in firm-level brands) .

Positivity

Is also referred to as 'positive associations' and is defined by the fact that the associations directed towards the source are positive and optimistic. These associations have been chosen with inspiration from the Positivity Scale by Narvaez (2006) as well as from the Helson (1948) attribution theory. As a result, positivity towards a brand is defined by four main components: Optimism, positive association, advantageous feeling, and auspiciousness (Nguyen et al., 2015).

Interaction

Is based on the customer's interest in interaction with the brand. The interaction consists of four components: *Dependency, attachment, information sharing,* and *communication quality*. This is built on the assumption that communication and interaction in general creates attachment and dependency, which in turn results in likeability. Research (Peppers & Rogers, 2010; Frow et al., 2011 acc. Nguyen et al., 2015) shows that this creates an opportunity for increased sales (persuasion), which further advocates for the preventive model we are presenting in this research.

Personified Quality

Consists of five components: *Friendliness, approachability, attractiveness, knowledgeable*, and *integrity*. This basically comes down to making a brand humane through personification and thereby influence how the consumer perceive the brand image. The five components of personified quality can be compared to the definition of attractiveness as they share the same

key traits, which are known to create likeability (Hovland & Weiss 1951; McCracken, 1989; Reysen 2005 according to Nguyen et al., 2015).

Brand Contentment

Is related to the satisfaction with the brand as a whole, and consists of the following: *Approval, cheerfulness, peace-of-mind,* and *gratification*. Brand contentment can be defined as the emotional and cognitive state of happiness as a result of thinking of the brand, which means that affect and emotion are crucial for brand likeability (ibid.).

Preventive questions for spotting likeability

This preventive framework helps the reader spot likeability by spotting similarity, attractiveness, likeable actions, and brand likeability. This is a crucial first step for being able to protect oneself against the power of likeability.

Preventive framework for similarity	**Explanation**
Do I perceive us as having a common goal?	When you have a common goal, you will feel more similar, and thus perceive the other person to be more likeable
Do I perceive us as wearing the same type of clothes?	When you wear the same type of clothes, you will feel more similar, and thus perceive the other person to be more likeable
Do we have the same name or date of birth?	When you have the same name, you will feel more similar, and thus perceive the other person to be more likeable
Preventive framework for attractiveness	**Explanation**
Do I find this person physically attractive?	When you find someone physically attractive, you may find them to be more likeable
Do I find this person friendly?	When someone is friendly, you may find them to be more attractive, and thus perceive the other person to be more likeable
Do I find this person warm?	When someone is warm, you may find them to be more attractive, and thus perceive the other person to be more likeable
Preventive framework for compliments and gifts	**Explanation**
Have I received compliments from this person?	When someone has given you a compliment, you may perceive them as more likeable
Have I received any gifts from this person?	When someone has given you a gift, you may perceive them as more likeable
Preventive framework from the Brand Likeability Scale	**Explanation**

Do I strongly believe that the brand can keep its promise to me?	If yes, this leads to increased brand likeability
Do I think the brand is associated with a positive motive?	If yes, this leads to increased brand likeability
Do I feel that I am favoured and given priority by the brand?	If yes, this leads to increased brand likeability
Do I believe that the brand continues to get better and better?	If yes, this leads to increased brand likeability
Do I stay with this brand because I am dependent on them?	If yes, this leads to increased brand likeability
Do I feel attached to the brand?	If yes, this leads to increased brand likeability
Do I think the brand openly shares information with me?	If yes, this leads to increased brand likeability
Do I have continuous interaction with the brand?	If yes, this leads to increased brand likeability
Would I describe the brand as friendly?	If yes, this leads to increased brand likeability
Would I say that the brand is approachable?	If yes, this leads to increased brand likeability
Do I think this brand is very attractive?	If yes, this leads to increased brand likeability
Would I ask for advice because the brand is knowledgeable?	If yes, this leads to increased brand likeability

Do I think the brand has a high level of integrity?	If yes, this leads to increased brand likeability
Overall, do I approve of this brand?	If yes, this leads to increased brand likeability
Do I feel cheerful when shopping at this brand?	If yes, this leads to increased brand likeability
Do I feel the brand takes care of everything for me?	If yes, this leads to increased brand likeability
Do I feel grateful for the brand's offering of services?	If yes, this leads to increased brand likeability

Step 2 - Acknowledge how you react

Knowing how to spot likeability is not enough to protect yourself against the power of likeability. You also need to know how information is processed on a more general level. This is an important step, considering that the way you process information will affect your reaction to the information itself. Then, once you know how information is processed, you will need to know how this information processing links to likeability. That is, being able to know *what* likeability does to your information processing and ultimately, *how* that (potentially) leads to persuasion.

In this section we will go through the most dominant theories on information processing in order to give the reader a basic understanding on how information is processed. According to Chaiken (1980), information can either be processed heuristically or systematically. We will therefore start off by by elaborating on the differences between these two ways of processing information.

At the end of this section we propose an explanation for how likeability affects information processing.

Information processing

The heuristic processing and the systematic processing approach are two opposing ways of

describing how humans process information. According to the systematic processing approach, we receive and judge messages with high accuracy, whereas the heuristic approach argues that we rely on the use of general rules-of-thumb, which we have developed through past experience and observations (Chaiken, S., 1980). The Heuristic Systematic Model (HSM), was first developed by Chaiken (1980; 1983; 1989 acc. Ferran, C. & Watts, S., (2009), Videoconferencing in the Field: A Heuristic Processing Model, Management Science, Vol. 54 (9), 1565-1578) and explains the use of heuristic cues as something to be activated in situations, which require higher cognitive load . In other words, to save cognitive energy, this cognitive load can make the subject use information about the communicator as a cue for information processing (Ibid.). Another study (Chaiken, 1980) shows that another use case for heuristic processing is when the subject is faced with a topic of low consequence and/or low personal involvement . This means that subjects who are deeply involved in a given topic or experience having high consequences at stake, spend more time thinking about presented arguments, and thus they apply the systematic approach (Chaiken, 1980; Roskos-Ewoldsen, D., R., Bichsel, J. & Hoffman, K., (2002), The Influence of Accessibility of Source Likability on Persuasion). Furthermore, if subjects are faced with a lack of arguments or information, they may default to heuristic processing, which can make them rely on information cues of the communicator when there is not sufficient information available (ibid.).

Information processing in a commercial context

Knowing how information is processed is especially relevant in a commercial context, as we are constantly being exposed to brands who want to persuade us into buying their products. One way of trying to do so, is through the use of advertisements. MacInnis and Jaworski (1989) proposes a model that seeks to explain how we process information in commercial contexts. This model not only explains *why* we start processing information (eg. watch an ad), it also explains *how* advertisements are able to persuade us into formatting a new attitude (eg. likeability) towards the brand. The model is divided into 3 overall segments; *Antecedents, Processing, & Consequences* (MacInnis, D. J. & Jaworski, B. J., (1989), Information Processing from Advertisements: Toward an Integrative Framework)

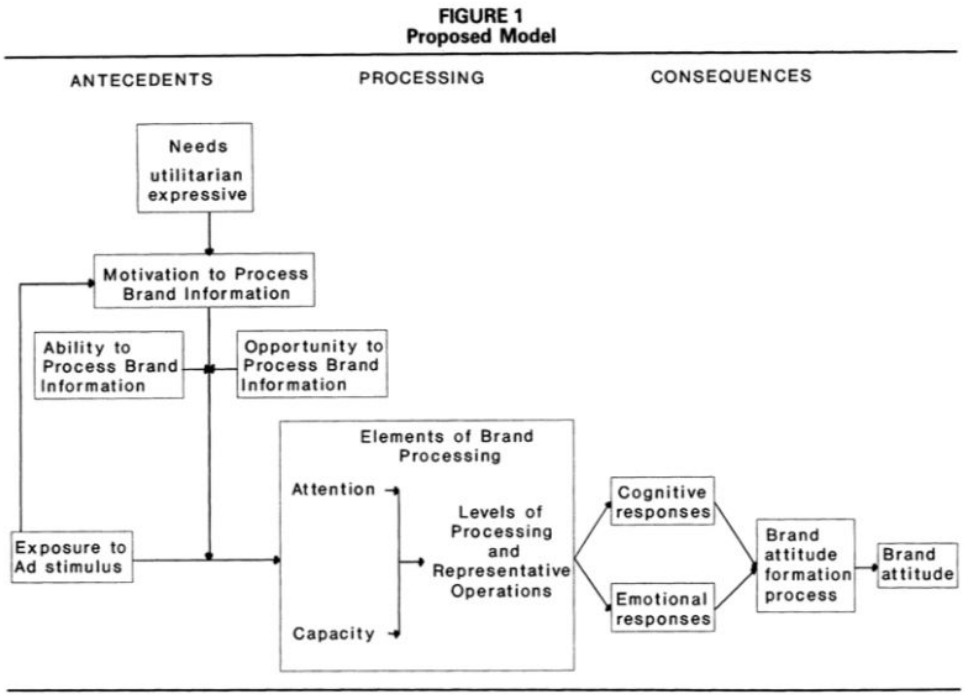


Figure 1, Maclnnis & Jaworski (1989)

Antecedents

In order to create motivation for processing brand information, one first have a need to remove a problem (utilitarian need) or to provide social utility (expressive need). This need leads to a motivation to process any information about a brand that wants to solve this need (Maclnnis & Jaworski 1989). This motivation aligns with Chaiken's (1980) concept of personal involvement. Recall that Chaiken states that personal involvement affect how information is processed, either heuristically or systematically (more or less time spent processing). The motivation must therefore also be dependent on the personal involvement.

Processing

When a person directs his/her attention towards an advertisement, the amount of allocated attention will depend on how motivated he/she is. The more attention that is given to the advertisement, the more mental capacity (for instance, working memory) will be allocated to analyze the information given in the ad (Maclnnis & Jaworski, 1989). As more attention and capacity is allocated to the advertisement (depending on the need and motivation), the consumer will dive further into the information of the ad, and analyze the message and the

communicator in more depth.

Put differently, when a person sees a cue in the ad, the heuristic processing starts, and this cue either makes him/her allocate more/less cognitive capacity depending on the associations of the cue in regards to his/her motivation and needs (personal involvement). If the cue has highly relevant associations, the person will start processing the information more in depth (systematic processing).

Consequences

The level of brand processing creates two types of responses during the advertisement; cognitive responses (thoughts) and emotional responses (feelings) (ibid.). Depending on whether these responses are positive or negative, the person will formate his/her attitude towards the brand based on these responses (likeable vs not likeable).

Personal bias and information processing

Now that you know how information processing works on a general level, consider how your information processing differs from mine depending on our different biases. In this section, we will elaborate on how this affects your processing.

According to Hart el al. (2009, acc. van Strien, J. L. H., Kammerer, Y., Brand-Gruwel, S. & Boshuizen, H. P. A., (2016), How attitude strength biases information processing and evaluation on the web) people are twice as likely to selectively choose information that supports their prior attitudes. This means that people have a tendency to be more attentive to attitude-consistent information, and they will process this type of information *before* considering attitude-inconsistent information (Graf & Aday, 2008 acc. ibid.). This concept is called a *confirmation bias* (Nickerson, 1998, acc. ibid.) and can be linked with Chaiken's (1980) and Roskos-Ewoldsen's (2002) findings on high versus low personal involvement. These findings are also supported by Yoon et al. (2011), who found that our information processing is influenced by a selective, regulatory focus (Yoon, Y., Sarial-Abi, G. & Gürhan-Canli, Z., (2011), Effect of Regulatory Focus on Selective Information Processing). This means that when subjects are faced with high information loads, they tend to rely on positive information (attitude-consistent information). As a result, a person would for example evaluate the likeability of a brand higher, if the brand communicates bias-positive

information. van Strien et al. (2016) conducted a study, showing that participants who felt strongly about a topic and had strong prior attitude strength spent *less* time processing website logos of *attitude-inconsistent* websites and judged the credibility of the overall website lower (compared to an attitude-consistent website).
They also found that people with weak prior attitudes in regards to a certain topic, showed a tendency to be more open to process attitude-inconsistent information. This means that *less* personal involvement made ground for a more systematic approach to information processing. However, another study (Chaiken, 1980) found that less personal involvement resulted in less *motivation* for thorough processing, which in turn resulted in heuristic processing. This indicates that the processing mode and personal involvement are *not* causal effects of each other.

We therefore argue that the focus on heuristic versus systematic processing (in former literature) is inadequate. For instance, Debora et al. (2006) showed that the information processing in consumers improves if an ad matches their *current* processing mode (Thompson, D., V. & Hamilton, R., W., (2006), The Effects of Information Processing Mode on Consumers' Responses To Comparative Advertising). For example, thoughts can evoke emotions, and these emotions can in turn change the processing mode. In this way, emotions work as a measure of relevance, which helps with effective processing (Gigerenzer, G. & Selten, R., (2001), Bounded rationality: The adaptive toolbox). Also, Gigerenzer proposes that emotions such as joy and pride will *shorten* the processing of a message (heuristic processing), if the receiver is already satisfied with the current situation (Ibid.). Consider for instance how a person in a good mood might process information differently than a person in a bad mood: they might form different attitudes towards the communicator (eg. likeable vs not likeable) based on their current moods (Sinclair, R., C., Moore, S., E., Mark, M., M., Soldat, A., S., & Lavis, C., A., (2010), Incidental moods, source likeability, and persuasion: Liking motivates message elaboration in happy people).

Information processing and likeability

In this section, we will elaborate on how likeability affects information processing. This

section will be divided into *source likeability* and *personal involvement,* and we will argue why these two topics are of main interest in relation to information processing and likeability.

Source likeability

Source likeability can be defined as an attitude or as an "[...] affective evaluation (likability) [that] is linked to an object (the source)." (Roskos-Ewoldsen et al., 1992, p. 19). In other words, a likeable source is someone or something that you like. As mentioned, several experiments have shown that likeability is the *essential* factor of persuasion, and source likeability cues have been a central element (Ibid.). A study conducted by Chaiken and Eagly (1983) found that likeable sources were more persuasive on videotaped messages (compared between written, audiotaped, and videotaped). This clearly indicates that source likeability *does* affect information processing, considering that subjects have more thoughts *about the communicator* and greater distraction from the message itself when subjects could *see* the communicator (Chaiken, S., & Eagly, A., H., 1982)

Even though source likeability is usually seen as a heuristic cue, under certain conditions, it may lead to systematic processing. However, this may *not* affect the persuasive effect of likeability. We argue that humans use these different types of processing, *not* in a rigid system, but when it *fits* our selfish needs the most. Take for instance the example of a person in a good mood. In order to maintain a good mood, he/she use heuristic information processing when he/she is encountering messages that could possibly endanger his/her mood. On the other hand, if people encounter a message that could *enhance* their current mood, they instead rely on systematic processing *if* this type of processing would help them achieve that. Since a likeable source might be a cue to maintain the subjects mood, this source cue might lead the happy recipient to process the message *systematically*. (Sinclair et al., 2010).
Thus, it does not matter whether you process information heuristically or systematically. Rather, the perception of whether the source is *likeable* or not is what matters the most in terms of how the information is processed.

Personal involvement

Since the persuasive effect of likeability is *not* determined by the type of processing, we will elaborate on how personal involvement affects the perception of likeability. We find it fair to argue that personal involvement have a large influence on how likeability is processed and

therefore ultimately how persuasive a message is, considering that the perception of a likeable communicator is especially dependent on the receiver's mood and prior attitude (personal involvement). These will affect the way information is processed in a given situation.

Take for instance the example of attitude-consistent information. Attitude-consistent information can be a *cue* for similarity, which, as you recall, is a major likeability trait. We argue that when a person is exposed to attitude-consistent information by a communicator, he/she will *perceive* the communicator as being *similar* to him/herself. Ultimately this leads to him/her perceiving the communicator as likeable. This is also why a person would evaluate a brand higher (more likeable), if the brand communicates bias-positive information. Thus, attitude-consistent information acts as a likeability cue that is dependent on personal bias (and thereby personal involvement).

The same is true for brand processing. That is, if a brand communicates attitude-consistent information, we consider it to be similar, which ultimates leads to positive cognitive and emotional responses, and this creates the foundation for likeability. We therefore consider it fair to assume that the cognitive and emotional responses of the brand processing model (Maclnnis and Jaworski, 1989) are *also* affected by personal involvement.

Preventive framework

It turns out that the type of information processing used is *not* what determines the persuasive effect of likeability. This is due to the fact that information processing is more or less used when it *fits* our needs. It is therefore important to be aware of the interdependence of information processing, source likeability, and personal involvement. Information processing and source likeability are both highly researched topics in relation to each other, but personal involvement seems to be the element that ultimately sets the frame for processing source likeability (Eg. how mood affects current processing mode and the effect this has on source likeability cues.)

This has led us to present the following preventive framework, which should make the reader able to determine whether and/or how he/she is personally involved:

Question	Explanation
Can this information potentially enhance my mood?	If the information received matches and/or enhances your mood, you will perceive it as a likeable cue, and thus be more likely to be persuaded by it
Is the information consistent with my current attitude?	Attitude-consistent information creates similarity, which leads to source likeability

Step 3 - Reflect

Information processing is more complex than what we have described in Step 2. There are many facets to these cognitive processes, which cannot be described only through these "built-in" algorithms (heuristic vs systematic processing) we have presented. We believe that culture affects humans both physically and mentally, meaning that culture and the physical environment shapes the way humans interact. In this section, we will therefore explore elements that relate to Gigerenzer's term, bounded rationality. The term seeks to understand the correlation between cognitive (information) processing and actual (adaptive) behavior, which we will use to explain some of the cultural aspects of information processing in relation to the power of likeability.

Ultimately, this section will be divided into 1) how information processing is shaped by the physical environment, 2) how information processing is shaped by social surroundings, 3) how humans are embedded in culture, and 4) how all of this affects the power of likeability. Lastly, we will convert these inputs into more tangible action points for the reader by providing questions in a preventive framework.

1) Evolution and physical environment

From a evolutionary perspective, cognitive limitations (such as heuristics) are not viewed as flaws, but rather as cognitive advantages created by an evolutionary pressure. The argument is that our cognitive abilities, like any other ability, is a result of human adaptation.

According to Gigerenzer's term, bounded rationality, the function of cognition is affected by the environmental setting. Cognitive limitations are thus not caused by cognition itself, but rather limitations in the *environment* (Gigerenzer, 2001). These environmental limitations are mainly due to constraints in time and energy. Consider how time is a limitation when it comes to decision making. For instance, the person who is making the fastest decision might end up with the most resources (cognitive and physical energy). Fast processing of information cues is therefore viewed as a major *advantage*, which makes the use of heuristics beneficial. This cost-benefit analysis (time vs energy) is what Gigerenzer refers to as ecological rationality, which really emphasises the impact of the environment in relation to our information processing (ibid.). Just as survival of the fittest applies to adapting to the physical environment, the same goes for adapting the cognitive aspect of the human mind.

Taking this standpoint into account, it means that the physical environment of where you receive a message can in fact affect your processing of the message, since the environment gives you information cues.
Gigerenzer uses the example of how people reorder their playing cards for a quicker (less effortful) information processing (Ibid.). We consider it fair to propose that this rearrangement of surroundings is not necessarily always done by oneself, but can be done by others, especially in a commercial context. We argue that this is true for both physical and digital environments. Consider for instance, *where* an online advertisement is placed and *how* it affects your information processing. Imagine an advertisement about dog food in a mid-roll on Youtube (the advertisements that disrupt a video for five seconds). Whether you are watching a video about animal abuse or of a funny cat, it will inevitably affect your processing of the advertising message.
In a commercial context, this intentional rearrangement of the environment is also seen when it comes to store decor and website design, since both set the environment, and thereby information cues for the received message. Thus, these cues can intentionally be used to create likeability.

2) Social surroundings

It is not only the physical environment that affects information processing. Social surroundings also have an impact. Gigerenzer argues that these social surroundings generate

adaptive behaviours as well, else they would not have been favored by natural selection. The sole presence of others thus influences our information processing (ibid.).
Social learning - learning from others' experiences - makes the case for an easy solution to make decisions, which can be referred to a "do-what-others-do" heuristic, and it is an effective way of minimizing both time and risk, which makes the heuristic advantageous (other examples include "do-what-the-majority-do" and "do-what-the-successful-individuals-do").
Another perspective to this are norms and social expectations, which can also affect information processing. Norms are a way of acting in correlation with one's social environment without having to understand why. This saves processing time and is therefore an adaptive behaviour. An important element to norms is the fact that those who follow them are rewarded (we like them), and those who violate them are punished (we dislike them) (ibid.). In this way, the benefits of imitation heuristics are reinforced.
For instance, it is considered to be good manners (norm) not to interrupt people when they speak, and so if you do not interrupt people you will be rewarded for having "good manners". In other words, people reward you for following the norms. We therefore argue that these positive or negative impacts will, in correlation with attribution theory, affect the overall likeability of the source and thus his/her persuasiveness. Consider, how your perception of a salesman's likeability will decrease if he keeps interrupting you, ultimately lowering the probability of persuasion.

3) Culture

As stated above, information processing is a complex matter and cannot solely be described by what we have presented in Step 2. We propose that culture is an important aspect to understanding human behaviour and therefore also relevant in the context of information processing.
According to Gigerenzer, "Culture is information, stored in people's heads, that can be transmitted among individuals." (ibid., p. 344). We argue that this transmission can be viewed as communication of messages between individuals. This makes culture an essential element to include when speaking of the power of likeability, and information processing, considering that persuasion is dependent on messages being communicated between individuals.

According to Bruner (1990), core values are dependent on and created by culture. Our values have necessary functions and they are a part of the individual's identity. At the same time core values play a part in locating the said individual in a given culture.
This gives the opportunity to interpret meaning based on how we relate to our culture, as well as how the culture relates to us. In other words, Bruner believes that culture is constituting and the individual is a reflection of the culture. Thus, the thoughts and actions of individuals are in huge part a result of the former, current, and future (expected) cultural context, which ultimately leads to personal differences. These differences may show in the individual's self-view, which on a more fundamental level affects his/her information processing (Bruner, J. S., (1990) Acts of Meaning).

Consider two guys, John and Will, who are in the market for a new house. They are both able to spend a total of $500.000. However, John buys a house for the full amount of money, while Will only uses half of it. How come?
The difference in the above mentioned example might be explained by the *regulatory focus theory*, which states that people either seek more pleasure or tries to avoid pain (Aaker, J, & Lee, A., (2001) "I" Seek Pleasures and "We" Avoid Pains: The Role of Self-Regulatory Goals in Information Processing and Persuasion) (See Annex, Ending notes on research articles). This individual focus thus shapes their behavior towards certain goals (spend money versus save money). The tendency to either seek pleasure or avoid pain is shaped by previous experiences, and these previous experiences are affected by culture on both a macro and micro level (Ibid.).
Bronfenbrenner (1994) showed how this was the case through by looking at the development of children who were affected by The Great Depression. The development of these children were compared to the development of children who were not affected by the depression. He found that children who were affected by the depression, in general, had more success in life. He believed that the hard times during the depression motivated the children to go to college, and create a successful career (Bronfenbrenner, U., 1994, Ecological Models of Human Development). We argue that this can be compared to cultural differences (and thus impact) during upbringing, ultimately leading John and Will to prefer different things (creating personal differences).

Since culture creates personal differences, we argue that it affects information processing indirectly by creating a *predisposition* for what you perceive as likeable/dislikeable (or any other trait). For instance, you might associate someone with being likeable, while another person might associate the same person with being dislikeable. This is due to the personal differences created by culture (both micro and macro), which ultimately affects the information processing. One therefore have to know what is associated with being likeable in his/her own culture in order to be able to protect him/herself against it.

4) Likeability

This section is meant to tie the different aspects of Step 3 to likeability.
Put differently, since culture has an impact on information processing, how does this affect the processing of likeability? We will start by looking towards Gigerenzer to explain the relation between culture, information processing, and likeability.

Gigerenzer (2001) theorizes that if it was beneficial for plants to be partly eaten, these plants would have come to show so through evolution. In other words, there would be no need for them to advertise other irrelevant features, but those that would help it get partly eaten. This in turn would make human's heuristic processing of these plants efficient and evolutionarily beneficial (eg. it is a good idea to eat this plant). In other words, this view indicates a clear relation between humans and their surrounding environment. However, this view is varied by including social surroundings. Consider how the "do-what-successful-individuals-do" heuristic reinforce the likeability trait. Since likeability is one of the most powerful persuaders, we argue that likeable sources are *viewed* as successful individuals (socially) and thus affects surrounding individuals due to this heuristic (since it is evolutionarily beneficial).

To a large degree, this aligns with much of the research done in the field of information processing of likeability, where heuristic cues are essential. However, as we showed, both heuristic *and* systematic processing are adaptive behaviours; Recall, that the information processing mode shifts to fit our needs, making both types of information processing adaptive. When we take into account the intentional behaviour of humans when they communicate a message, the equation may therefore not be so simple as relying on heuristic (likeability) cues. The communicator may very well *know* how to be perceived as likeable

and may thus have a hidden agenda. For example, if a salesman knows the power of likeability, he/she may use it to *persuade* the receiver, making heuristics a *maladaptive* behaviour.

We consider this assumption to be fair, since it was stated in Step 2 that the act or trait of being likeable indicates general positivity towards the communicator. Recall that humans rely more heavily on positive information (likeability cues for instance), which affects everything this person does, according to attribution theory (Wachtler & Counselman, 1980).

This is not to say that heuristics are maladaptive per se. Instead, heuristics may help explain our *actual* behaviour when we are suspicious of the salesman who seems way too likeable (See Annex, Likeability and persuasion). In other words we *know* that we are in an environment, where he is *being* likeable in order to persuade us, and this in turn changes our behavior. This may be why companies say that "the consumer is more enlightened than ever"; It is a result of advertisement evolution.

Making it tangible

To sum it up, evolution, physical environment, social surroundings, and culture all have a huge impact on information processing. This is due to the fact that information processing is a result of adaptive, evolutionary behaviour. In other words, these elements impact how we perceive and understand information, ultimately leading to an individualistic view of likeability.

Based on cognitive evolution, social surroundings, and culture in relation to likeability, we have created a set of questions for how the reader can protect him/herself against the power of likeability:

Question	Explanation
Is the environment arranged by the communicator?	If the communicator has control of the environment, they can arrange the surroundings for more efficient processing of certain likeability cues.
Does the communicator follow norms and social expectations?	If he follows your norms and social expectations, there is a higher chance that you will find him likeable.
Does the communicator match my cultural preferences?	If the communicator matches your cultural preferences, there is a higher probability that you like him/her, since you are more similar.

Note:

We have excluded the questions *Do I have previous experiences with the physical setting?* and *Is this the first time I see this type of communicative message?* due to the fact it is not as simple as answering yes or no. For instance, if you have experience with a physical setting - or seen someone else in it - there is a chance you will default to doing the same thing you did last time, considering the outcome was positive. And likeability cues can indicate positive outcomes. But at the same time, if you have not seen this type of communicative message before, there is a chance that you have not adaptively developed cognitive defence mechanisms for it yet, and therefore you might be more vulnerable to likeable cues.

Discussion

In the article, we have shown that likeability is a powerful persuader. We have presented major traits leading to likeability, and created a protective framework for how these traits can be spotted. We have shown how information processing works on a general level, and how it has traditionally been viewed as heuristic *versus* systematic, with heuristic information processing (and thereby heuristic cues) being the dominating type of processing for persuasion. However, we came to argue that neither heuristic nor systematic processing is more or less persuasive (in a source likeability context), but that likeability instead activates the processing mode that *fits* the egoistic needs of the receiver. We then went on to provide a

protective framework which allowed the reader to determine whether or not he/she is personally involved, as this affects how likeability is *processed*. Lastly, we looked at how evolution, physical environment, social surroundings, and culture play a role in how likeability is perceived *individually*, leading to a protective framework for how one can be aware of his/her own perception of likeability, and thus ultimately protect oneself against the power of likeability.

Limitations

It is important to note that we have provided a *theoretical* framework, based on empirical data, for how one can protect oneself against the power of likeability. Our goal has been to make it easy and convenient to ask oneself a range of questions in order to determine whether someone or something is likeable. However, this is a model of phenomena (See Annex, Models), and has therefore not yet been tested in real life, which makes us want to question its validity. In this section we therefore want to look into 3 different problematics with the current framework. Specifically we will look into *the practical limitations, the likeability paradox* as well as a proposal for a *shortened version of the framework.*

Practical limitations

For this framework to be effective, one has to remember all 30 questions, which might be a very difficult task. This might require that you bring a physical copy of the preventive framework in pretty much all social (including online) situations. We imagine that this might lead to a lot of awkward situations that might even be harmful to social relationships. Furthermore, likeability to a large degree depends on your unique perception. It might therefore require a lot of cognitive energy to be able to constantly evaluate whether you perceive someone as being likeable, and it might even be impossible.

Recall, how information processing to a large degree is an adaptive behaviour, helping us to make decisions and ultimately providing us with more resources. Likeability cues might for instance help you find a partner or a friend, which is very beneficial. Fighting this mechanism thus means, that you are literally fighting evolution. In other words, if heuristic cues are "automatic" processes meant to save cognitive energy, and help you make more beneficial decisions (such as creating great relationships), fighting them must be a nightmare, and

perhaps even impossible. Consider for instance what happens, if someone exposes you to a likeability cue, and your automatic response is to associate it with something you like. Would it even be possible to stand back, and ask yourself whether you find this particular person likeable, and question his/her intentions? More importantly, would you even want to fight it? And would it even be beneficial in the bigger picture? Afterall, we don't know *what* is most beneficial long term; being able to spot likeability and avoid persuasion, *or* being able to have likeable people in your life and constantly be persuaded. Chances are, evolution already took account of this dilemma for us, based on what was more beneficial.

The likeability paradox

As mentioned earlier in this paper, likeability is a paradox. On one hand, we want likeable people in our life, and on the other hand we know, intellectually, that likeable people are more likely to persuade us. Nonetheless, we are very dependent on having people we like in our lives, and if we constantly try to protect ourselves against these people, chances are we might end up feeling isolated.

In this section we want to investigate the likeability paradox with inspiration from the series "Defending Jacob" which is an Apple original that launched in 2020. There is a particular scene in this series that summarizes the likeability paradox beautifully.

In the series, Jacob who is only 15 years old, gets accused of a murder, and his parents are convinced that he is innocent. Naturally this gets blown up in the news, which is taking a toll on Jacob's mother.

One night, Jacob's mother is so frustrated that she drives away from home and ends up on a random diner. She is in a very vulnerable position, when she meets a friendly (likeable) woman, who buys her coffee (gift), and they start to talk. This helps Jacob's mother find calm, and you can tell that her mood is lighting up thanks to the understanding from the likeable stranger. As a result of this, Jacob's mother tells the stranger about her life and what she is going trough.

All of a sudden, the stranger asks Jacob's mother if there is anything she'd like off the record. In other words, it turns out that the likeable stranger is actually a journalist who was thirsty for a great story. Jacob's mother then realizes that she was manipulated. She gets furious and

leaves the diner immediately.

What happened here is interesting. On one hand, Jacob's mother is very vulnerable and really *needs* a likeable person in her life. Someone who understands her. The stranger knows this (from the news), and wants to take advantage of it for her own benefit (writing a popular story). She does so, by providing her with a gift (coffee). Recall that gifts create likeability. Ultimately this makes the mother open up to her, and seek comfort and understanding from her. Then, once she finds out that she is in fact a journalist, she immediately leaves.
What is more important to Jacob's mother then, protection or friends?

Obviously, the above mentioned story is a rather extreme example, and yet it feels very familiar. There is probably not a concrete answer, but we believe the reader needs to seek for the best of both worlds. We therefore argue that when meeting new people (or brands), one should be able to know; A) that likeability is a strong persuader and B) the major traits leading to likeability. However, the current framework is taking several different variables into account, all contributing to protection against likeability. We therefore propose a shorter framework that is easier to use, in the hope that it will help people protect themselves, as well as avoiding over analyzing everything and everyone.

The SHIRT framework

So far, we have concluded that all 30 questions are too much to handle if they should be practical. We therefore propose to shorten the framework into 5 questions, making it more tangible. These questions are:

Question	Explanation
Do I perceive us as wearing the same type of clothes?	If you wear the same clothes, you might feel you are similar and/or sharing the same values. This creates likeability.
Do I find this person physically attractive?	If you find the person attractive, you also find him/her likeabile because of attribution theory.
Have I received any gifts or compliments from this person/brand?	If you have received any compliments or gifts, you might find the person/brand more likeable.
Do I feel that I am favoured and given priority by the person/brand?	If the person/brand makes you feel favoured, it creates likeability.
Do I have continuous interaction with the brand?	If you have continuous action with the brand, it creates likeability.

The above mentioned questions are easy to use in practice, which ultimately makes it easier to protect oneself against the power of likeability. At the same time, it will help the reader avoid over analyzing every given situation. We have developed the acronym "**SHIRT**", which will help remember the framework:

S - Do we wear the *same* clothes?
H - Is the person *hot* (physically attractive)?
I - Do I have continuous *interaction* with the brand?
R - Did I *receive* a gift or compliment?
T - Does the brand *treat* me like I am favoured and high priority?

Even though this shortened framework makes things more tangible, it still has its limits. For one, it neglects several important aspects of likeability, and it will therefore not guarantee any protection. However the questions in this version are much easier to answer, as it is quite easy to know if you are wearing the same clothes, finding the person physically attractive, having continuous interaction, received any gifts or compliments, or if you are feeling favoured by a particular brand or person. We therefore believe that even though this framework is much

shorter and lacks several variables of likeability, it will still work better due to the fact that the longer version is very difficult to apply practically.

Our model of phenomena needs to be empirically validated (and thus get a dimension of a model of data) in order to know if it is able to protect people against persuasion stemming from likeability. We have proposed how such and experiment could be designed, and included it in the annex (See Annex, Future research).

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Annex

The reader's guide for this annex

The purpose of this annex is to dive deeper into some of the theory we have been using in the current paper. Due to the limitations and structure of this article, much research have not been thoroughly presented, and we therefore wish to dive deeper into this research. Specifically, we will elaborate on the theory behind the use of models as a way of learning, how the scales we have been using are developed as well as the likeability- and information processing literature. We will also elaborate on the cultural aspects of this paper, as we believe this topic deserves more attention. At the end of this annex we will provide the reader with some general elaborating thoughts (researchers note) as well as proposing a range of experiments for how the practicality and validity of the SHIRT framework can be tested.

Models

As Ronald N. Giere states in Cognitive Models in the Philosophy of Science (1986), most people believe that science is rational and works in regards to learning about the world. However, science being an effective way to learn about the world implies that one can succeed in doing so - one would know what it seems like to succeed. This definition of rational, succeeding science is defined by science itself, making it self-affirming (also called circular) (Giere, R. N., 1986).

Thus, the goal is not to tell whether or not science is a rational way of learning about the world, but rather to explain *some* part of the world's underlying causal nature (ibid.). With this in mind, we do not seek to justify the scientific research used, but instead explain it via the use of a model.

Models have been used in cognitive science for many years (ibid.), and even though the model used in this paper is not cognitive per se, it is still influenced by the cognitive way of conducting models. The most prominent purpose is to scientifically explain *how* and *why* in an easily accessible manner. In other words, models (including ours) are used to *increase* understanding with systematic explanations (Thagaard & Litt, (2012), Models of Scientific Explanation). Furthermore, models are in fact believed to increase learning.

Hughes' framework (1997, acc. Hartmann, S. & Frigg, R., (2005), Scientific Models) for learning, called DDI account for modelling, is divided into three stages: 1) denotation, 2) demonstration, and 3) interpretation. First, 1) we establish a relation between the model and the theory, 2) we investigate (and learn about) the model for theoretical claims, and 3) these claims are then connected to that of the theory (ibid.).

In general, models are a representation of theory. They embody the essential features of the theory and make the abstract theory tangible through an object. Thus, the model is an interpretation of the theory and the underlying general law of the theory. Besides being a representation of the theory, models have two representational functions. These functions can be categorised as *models of phenomena* and *models of data*. The first deals with theoretical laws, whereas the latter deals with data. Often, models of data are visualized as data points in a graph after the data have gone through 'curve fitting' (removing errors etc.), creating a smooth curve. On the other hand, models of phenomena describe a phenomenon (a relatively stable and general feature of the world). However, categorising a model as either phenomena or data does not exclude one another (Hartmann, S., & Frigg, R., (2005), Scientific Models). The model in this paper is primarily a model of phenomena, and deals with fictional objects. But we believe it's fair to assume that the model draws inspiration from both of the two representative functions; it describes a phenomenon, but it describes this presented phenomenon based on research papers of observed data.

In general, models can be *idealized*, meaning that they are simplified. There are two categories of idealized models: *first class* and *second class*. First class models have stripped away all elements that are irrelevant to the problem. The purpose of this is that one is able to focus only on limited, relevant properties. Second class models include distortions of reality to create uniform laws (eg. perfectly rational agents) (Hartmann & Frigg, 2005). Our model, The Model of Embedded Processing, falls into the first class category.

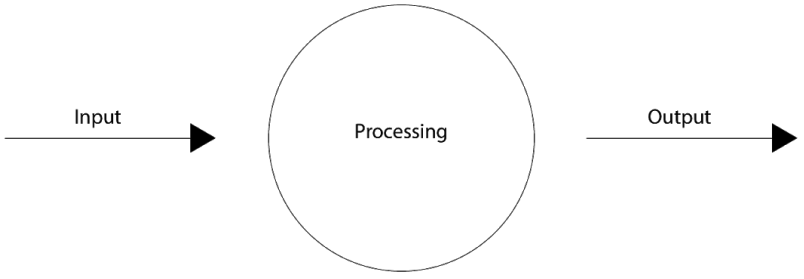
Making models

When creating models, they rely on the three processes involved in explanation. These are 1) providing an explanation from available information, 2) generating new hypotheses that provide explanations, and 3) evaluating competing explanations (Thagard & Litt, 2012).

At the same time, *cognitive* models build on the four theoretical approaches of computational models. These are deductive (using logic or rule-based systems), schematic (using explanation patterns), probabilistic (using Bayesian networks), and neural (using networks of artificial neurons) (ibid.).

Let us (in a simplified manner) demonstrate how these underlying processes and approaches have come to form the model used in this paper.

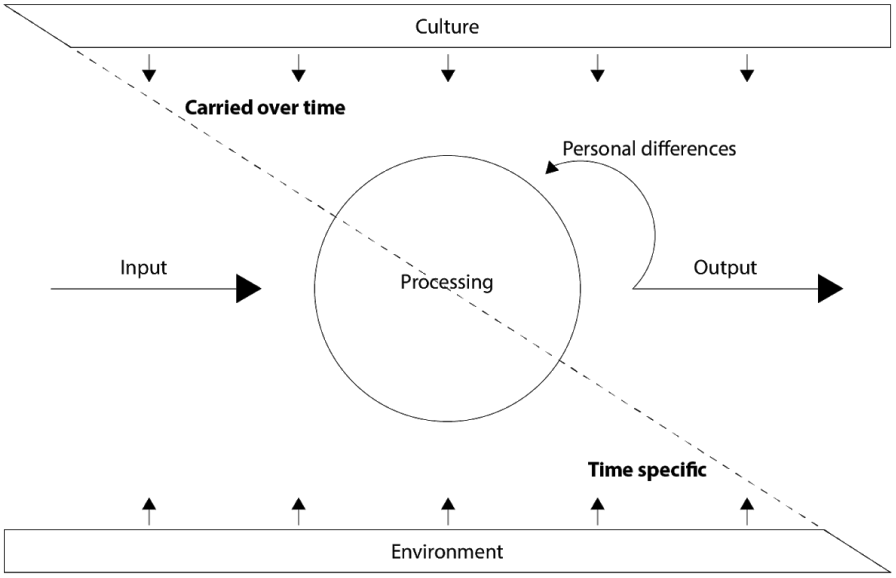
People receive inputs.
They have thoughts and/or feelings about these inputs.
They react (or don't react).



This almost-behaviourist approach is the simplest form of the model used in this paper. In some cases, however, the explanation has to be more thorough to explain unexpected results that do not fit the current logical system (ibid.). And thus, by looking at competing explanations, the model had to unfold the context of the individual:

Humans are social animals.
Humans are adaptive.

Social and physical surroundings thus affect them now and forward.



These are of course oversimplified examples, but nonetheless they show the process of creating the model. In both cases, the examples build on hypotheses - both ours, and more importantly other researchers' hypotheses - which are then confirmed by empirical (but also partly by theoretical) research papers, making the process deductive. Throughout the paper, this process is made clear, and the competing explanations for each element are explored (eg. *systematic vs. heuristic processing* and *evolution vs. culture*).

Model discussion

Metaphors have been argued to be a central element in scientific explanation (Rentetzi, M., (2005), The Metaphorical Conception of Science Explanation: Rereading Mary Hesse), and Rentetzi (2005) stands on the shoulders of several other researchers, when she states that the role of metaphors have been identified as rhetoric, heuristic, and cognitive. The argument is that metaphors are present everywhere in scientific language and are used to explain theories and scientific work. Since the current paper deals with heuristics and cognition, it becomes even more relevant to take into account the weakness of scientific explanation by looking towards metaphors.

According to Hesse (acc. ibid.), no scientific model can be viewed as just either true or false based on former observations (*a priori*). Traditionally, inferential and causal explanations are dependent on general laws, uniformity, and invariant meaning of the concepts involved (ibid.). If these scientific assumptions were true, no model without former proof would be scientifically accepted (including ours). However, explanation and the meaning of the theoretical concept cannot be looked upon separately and this is where the metaphorical conception comes into play.

Descriptions of observations are not based solely on the events themselves, but are an interpretative process that is affected by the observer and the current language used in the observer's community. Language thus is dynamic and therefore, one has to view scientific concepts within the context they were developed. In this way, science is a process in which interrelation of theories, experiments, and instruments can (and will) be interpreted.

This view on scientific explanation is presented by Hesse (acc. ibid.) as including three main points. These are 1) the problem of deductibility, 2) the thesis of meaning invariance, and 3) the problem of the meaning of theoretical terms. Above we have already taken a look at 2) and 3). In regards to 1) deductibility, Hesse (acc. ibid.) believes the deductive model should be expanded. The most dominant problem is the lack of ability to judge the better explanatory theory, since the power of the explanation is not only dependent on logical (current) factors, but *also* non-logical factors (expansion). The expansive dimension is where metaphors assert themselves.

Metaphors are made of a primary and a secondary subject, which both are commonly understood ideas and beliefs. In other words, these subjects (or concepts) can vary in meaning and thus, the communicator commits to accepting a standard belief about them when he/she uses them in a certain combination and situation. Rentetzi (2005) uses the metaphor "life is a journey" to illustrate how the primary subject (life) and secondary subject (journey) each have a set of concepts, ideas, and beliefs associated with them. All these presumptions add to the meaning of the metaphor, and the connection of the two subjects affects how we view them both in the metaphor. However, it is not only a question of connecting two concepts or ideas, but rather how the interaction of the two makes aspects visible that were not otherwise there.

Metaphors are analogies, and using them create *negative* analogies and *positive* analogies. This means that using a certain analogy (eg. comparing billiard balls to gas molecules) will create aspects that are only applicable for one of the two concepts (negative analogy), but also aspects that are applicable for both concepts (positive analogy). Our understanding of both positive and negative analogies helps identify the explanatory ability of a metaphor.

Taking the standpoint of Hesse and Rentetzi (2005), one becomes aware of how the Model of Embedded Processing is based on inferential research and causal explanations and is dependent on general laws, uniformity, and invariant meaning of the concepts involved, which is exactly what Hesse (acc. Rentetzi, 2005) argues against. In fact, this rigidness of scientific explanation can be argued to be the reason why the result of the model, and the paper in general, has practical limitations; it seeks to create general laws to such a degree that it loses its practicality.
However, we want to argue that the aspects of environment and culture (and the process the researchers of this paper went through when the aspects were included) shows an understanding of the importance of dynamic language and interpretation. The model thus becomes paradoxical; It includes the awareness of interpretative elements, but does so in a uniform way that strives to create general laws. Then, if we were to follow the metaphorical beliefs of Hesse, we would expand the model with an explanatory metaphor like "People's understanding of their surroundings today are built with the building blocks of yesterday." As Hesse states, this metaphor cannot stand by itself, but it implies an element of practicality that the model seems to lack. And despite its simplicity, it rounds up the (probably) most essential takeaway: The more experienced you become with the power of likeability, the more likely it is that you will become able to protect yourself against it.

Another critique of the model could be the simplicity of the processing element. Given the large amount of research on cognitive processes, it may seem lacking to picture information processing in such simple (idealized) manner. Looking at the Model of Embedded Processing from a *realism vs antirealism* perspective, realist would argue that by de-idealizing the model, it would be more accurate to the real world. However, we believe that the statements presented above (that of metaphors and practicality) proves the opposite to be true: idealization makes the model easier to understand, while simplicity (the metaphor) makes the

model more practical. This is in correlation with the belief of antirealists that "good" models are not necessarily true (Hartmann & Frigg, 2005). However, we *do* believe the lack of detail in the model is made up for through the paper. Here, we are especially referring to Step 2 Acknowledge, where these cognitive processes are described and analyzed. But if we were to elaborate on the processing element in the model, we would draw inspiration from Valsiner's *Laminal model of internalization/externalization as double transformation* (See Annex, Valsiner).

Scales

In this section we will dive deeper into the scales we have been using in this paper. These scales include the Reysen Likability Scale and the Brand Likeability Scale. We will dive into the theoretical background of each of these scales, in order to dissect the rationality behind the different measuring points. We will also look at some of the limitations of these scales in the hope that the reader can use this knowledge to gain further understanding of how likeability is measured, as well as which traits it is composed of.

The Reysen Likeability Scale

The Reysen likeability Scale was developed by Stephen Reysen, in the hope to create a more reliable scale for measuring likeability. Recall, that likeability has long been known to be an effective persuader, and researchers have therefore found it relevant to be able to measure whether someone is likeable. However, researchers' approach for measuring likeability have varied. The Reysen Likability Scale was therefore constructed to create a new (and more valid) approach for measuring likeability, unifying how it should be measured (ibid.). This makes sense, considering that it is difficult to determine the effect of likeability if different researchers do not measure likeability in the same way.

According to Reysen (2005), likeability has previously been measured in different ways, making it hard to secure validity in the likeability research. For instance, Carli et al. (1991, acc. Reysen, 2005) used three different items to measure whether someone was likeable. Specifically, the participants had to rate how satisfied they were with their roomate, how

much they liked their roommate as well as to what extent they considered them as friends. They used a 9-point Likert scale to measure this. Another example of measuring likeability is seen from Drachman, deCarufel and Insko (1978, acc. ibid.), who measured likeability using only to items. These items were how likeable someone was, as well as how compatible they were. A third method by Byrne and Rhamey (1965, acc. ibid.), was to use a 7-point Likert scale to measure two items. The first one was "I feel I would probably like this person", and the second one was "I would like working with this person in an experiment". Furthermore, Rubin (1970, acc. ibid.) used a 5-point Likert scale to measure romantic love, which asked three items. These were: "Most people would react favorably to Person X after a brief acquaintance", "Person X is one of the most likeable people I know" and "Person X is the sort of person whom I myself would like to be". According to Reysen, these measures are too narrow since they don't include many items, making them unreliable and less valid (Ibid.).

Chaiken and Eagly (1983, acc. Reysen, 2005) did a study showing that likeability was effective in creating attitude change (persuasion) in its participants. Specifically, likeable communicators did better than dislikable communicators did. In contrast to the previously mentioned short scales, Chaiken and Eagly used *12* different items in order to measure likeability, making them able to measure likeability in a more reliable way. These items included; likability, knowledgeable, modesty, intelligence, approachability, competence, warmth, trustworthiness, pleasing, sincereness, friendliness, and unbiasedness. The participants had to rate these different items on a 15-point Likert scale (ibid.). Interestingly, it turned out, that the most important factors for predicting likeability was attractiveness and expertise. Both attractiveness and expertise consisted of several key traits; Attractiveness consisted of likable, friendly, approachable, pleasing, modest, warm, and unbiased, while expertise consisted of knowledgeable, intelligent, and competent. It was therefore concluded that these two traits combined measured likeability. (ibid.)

Since the goal of the Reysen Likability Scale was to measure likeability in a more reliable way than previously done, the scale had to conclude the best elements from the previous scales. Ultimately, the Reysen Likability Scale came to look as following:

1. This person is friendly

2. This person is likeable
3. This person is warm
4. This person is approachable
5. I would ask his person for advice
6. I would like this person as a coworker
7. I would like this person as a roommate
8. I would like to be friends with this person
9. This person is physically attractive
10. This person is similar to me
11. This person is knowledgeable

For each question, the participants have to decide whether he or she; Very strongly disagree, Strongly disagree, Disagree, Neutral, Agree, Strongly agree, Very strongly agree.

In order to determine whether this scale was reliable, Reysen used laughter as an indicator. That is, if the participants laughed, it was believed to correlate with likeability (ibid.). This was done based on previous research conducted by Bachorowski and Owren (2001, acc. ibid.) who used recorded laughter as a measurement of how likely people were to; wanting to meet with the person whom they heard laugh, their affective response to the laughter, their perception of the person laughings friendliness as well as whether they found the laughter to be sexy. Ultimately, this suggested that there was an association between laughter and certain aspects of likeability (ibid.). Thus, in Reysen's study, laughter was therefore used as a measurement of likeability with the purpose of validating the scale. In order to test the scale, participants were videotaped and then had to rate these individuals using the Reysen Likability Scale. It was then proposed that laughing individuals would receive *higher* likeability scores. The results showed that the Reysen Likability Scale indeed was a reliable measurement of likeability. That is, if the individuals on the video laughed, they tended to receive higher likeability scores.

Even though this seems like a logical way of measuring likeability, there are still some limitations. The study is using laughter as a precondition for whether someone is likeable, which we believe is a potential limitation. Recall, that emotions are contagious, and that

people in a good mood will want to contain that good mood. If an individual is "contaged" with laughter, and thus becomes in a good mood, he or she will seek to maintain that pleasant state of mind. It would therefore be reasonable to argue that he or she would not prefer to do a "low" score on the likeability test, as it might endanger their current mood (since it forces them to express negativity). The study might therefore to a larger degree be a reflection of how laughter is *creating* a positive mood, which leads people to protect this state of mind, ultimately expressing likeability towards the individuals in order to avoid endangering their current mood.

The Brand Likeability Scale

The Brand Likeability Scale is used to measure how likeable brands are. It is believed that a likeability in brands consists of; more positive associations, increased interaction, more personified quality and increases brand contentment (Nguyen et al., 2015) This is of course something that most brands wish to achieve, in the hope that it will lead to more sales. The scale was made since few studies had proposed likeability scales specific to brands, with the hope of helping brands enhance the relationships between its consumers (ibid.)

According to Nguyen et al. (2015), likeability is a cognitive process, which leads to things such as brand attachment, brand love, and brand satisfaction. These factors can therefore be used to evaluate the consumers relation to a particular brand (Park et al., 2010; Batra et al., 2012; Fornell et al., 2010, acc. ibid.). However it is important to mention, that Nguyen et al. only focuses on likeability *after* a purchase has been made. That is, their study does *not* measure processes leading to likeability before a purchase has been made (ibid.).

Much in line with the Reysen Likability Scale, Nguyen et al. (2015) believes that brand likeability consist of multiple dimensions. They too believe that single measurements are not reliable. Furthermore, they argue that previous research in the marketing literature has been focusing on satisfaction and brand reputation instead of brand likeability (Nguyen et al. 2013b; Reysen, 2005, acc. ibid.). Nguyen et al. therefore proposes a scale that both includes psychological aspects of likeability (eg. the Reysen Likability Scale) *and* brand attitudes (ibid.).

In order to create a new scale for measuring brand likeability, the researchers therefore draw inspiration from previously reliable and validated scales from cognitive psychology, as well as scales specific to branding (ibid.). Ultimately, this results in a new scale consisting of four different dimension; Positivity, Interaction, Personified quality, and Contentment.

Positivity

This dimension measures whether or not people (customers) have formed positive associations with the brand. In order to measure this, the researchers drew inspiration from the positivity scale, which was created by Narvaez (2006, acc. ibid.), as well as the attribution theory. This is due to the fact that the positive associations activate the attribution theory, which makes the consumers perceive the brand as being more likeable (ibid.).
Ultimately, the positivity dimension thus consists of; optimism, positive associations, advantageous feelings and auspiciousness, which we explained previously in this paper.

Interaction

This dimension measures the degree to which the customers interact and communicate with the brand. In other words, the customers most have a *genuine* interest in wanting to interact with the brand (not because of practical reasons). This builds on the assumption that if people are genuinely interested in interacting with a certain brand, it must be because they like it (Boulding et al., 2005, acc. ibid.). Ultimately, the interaction measurement is therefore composed of four components; depencendy, attachment, information sharing, and communication quality, which we have explained previously in this paper.

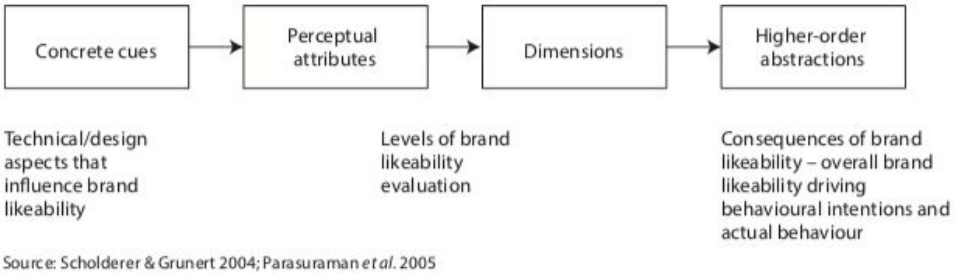
Personified quality

Personified quality means that the brand is able to treat each customer *individually*. Reysen (2005, acc. ibid.) argues that customers respond positively if they are receiving individual treatment through content that interests them, and feels personal. Personified quality therefore consists of five different elements which are; friendliness, approachable, attractive, knowledgeable and integrity. The researchers thereby suggest that these likeable traits, which have been previously known to create likeability in people, also works in creating likeability in brands (Park et al., 2010, acc. ibid.).

Contentment

Nguyen et al. (2015) defines brand contentment as "... the cognitive and emotional state of *happiness*, resulting from the evaluation of the brand" (ibid., p. 783). This is built on the idea that consumers already have an idea of what they think a likeable brand is. Their idea of brand likeability stems from previous experiences with brands (social norms, competing brands, previous transactions) (Feinberg et al., 2012, acc. ibid.). Contentment is therefore measured through four items, these being; approval, cheerfulness, peace-of-mind, and gratification. The emotional aspects of brand contentment are measured through approval and cheerfulness, while peace-of-mind and gratification is believed to create contentment (general satisfaction with the brand) (ibid.).

The theoretical framework for brand likeability was developed using the means-end framework:



Source: Scholderer & Grunert 2004; Parasuraman *et al.* 2005

Figure 2 A means–end framework of the brand likeability scale

The authors suggest that cues (such as price, experience, service) leads to perceptual attributes (enduring likeability evaluations that are less dependent on concrete technicalities such as price etc.), which leads the consumer to evaluate the brands' general appeal over the four dimensions (positivity, interaction, personified quality, and brand contentment), ultimately resulting in brand likeability (ibid.).

Even though the Brand Likeability Scale captures several variables of likeability, it still has its limitations. For one, it has been developed based on *post-purchase* customers, that is people who already bought something from a brand. It would therefore be reasonable to argue that there is a considerable difference between *pre-purchase* customers and

post-purchase customers, especially when it comes to likeability. Furthermore, perception of the different dimensions may vary from person to person based on their previous experiences. That is, two people might not associate approachable (or any other trait) with the same thing, making it hard to measure and ultimately validate.

Likeability research

In this section we want to dive deeper into the likeability literature in relation to persuasion. Based on research formerly done by the researchers of this paper (Jensen, P. M. and Hyldig, M., (2020), Likeability and persuasion: A review), we will introduce the reader to several peer reviewed articles, going through how the studies are conducted as well as what they aimed to find. We will show the reader how likeability is able to create persuasion in some situations, and how it is sometimes not effective. We will also include studies, which show that likeability have no effect on persuasion at all, as well as a study that shows how likeability in some cases can have a *reverse* effect on persuasion.

Likeability and persuasion

McLaughlin (2016) set out to investigate the role of likeability in an online context. Specifically, she looked at Facebook communities centered around a specific brand. For instance, a brand might set up its own Facebook community with the goal of making people (potential customers) join it. Once they join, they get notifications every time a brand posts a piece of content (eg. a shirt they want to sell). It can therefore be very beneficial for brands to have as many people as possible join *and* engage with their community. However, what makes people want to join a community in the first place? McLaughlin (2016) sought out to investigate this question in her 2016 study, where she not only looked at *why* people join the community in the first place, but also how likely they were to *read* the content and *interact* with the brand, as well as *revisiting* the community on a regular basis. Recall, that continuous interaction is one of the major factors in the SHIRT framework, making this study of high interest to our model. McLaughlin used 252 subjects in her study. These people were randomly invited to join a Facebook community created by a brand. However, the community had 4 different versions, and the participants were thus divided into 4 groups in order to find out, which community had the best effect. The subjects watched pictures of the communities and answered questionnaires. The study concluded that likeability was the most

important factor in terms of whether or not the participants wanted to join and interact with the community on a regular basis. However, it turned out that credibility was also an important factor *leading* to likeability. That is, if the participants believed that the community seemed credible, they also came to *like* the community more, which ultimately had a persuasive effect. It turned out, that in order to determine whether or not the community seemed credible, the participants looked at *other* members of the community, in order to find out if they seemed legitimate (actual participants of the community). Recall, that we have mentioned the advertisement evolution (the idea that people adapt to advertisements over time). We believe that it is reasonable to argue that the people in this study wanted to check up on the participants in order to find out if they were *real* persons with *genuine* interest in the brand, and not just staged by the brand. A brand might for instance create several fake Facebook profiles and make them join the community as a way to make the brand *seem* more popular. Nonetheless, as more and more brands do this, consumers might *adapt* to this strategy, and thus protect themselves against it. They therefore learn how to distinguish between *genuine* credibility and *fake* credibility.

Need for cognition

Need for cognition (NFC) is an interesting term that we have not mentioned in the current paper. According to Reinhard and Messner (2009), people either have a high NFC or a low NFC (Reinhard, M., & Messner, M., (2009), The effects of source likeability and need for cognition on advertising effectiveness under explicit persuasion). The difference between the two is to what degree the person enjoys to process information systematically. People with *high* NFC thus prefer to process information systematically, and people with *low* NFC prefer to process information heuristically (ibid.). Recall, that likeable cues can be activated heuristically, which makes the NCF term very interesting. Consider for instance, how people with *low* NFC would react differently to likeability cues (since they are processing it heuristically), than people with *high* NFC would (since they are processing it systematically). Reinhard and Messner (2009) investigates this phenomenon in relation to source likeability and persuasion. To do so, they divided 128 participants into groups based on whether they had low or high NFC. Each group was then matched with different experimental designs (conditions), in order to find out how they reacted to likeability. They were thus either assigned to a likeability condition, a dislikeability condition, or a control group. They

discovered that people with low NFC tends to rely on heuristic cues such as whether or not a person is likeable or not. This was concluded based on the fact that people with lower NFC were more easily persuaded by a likeable experimenter since they relied more heavily on the likeability cues. They even took it a step further and showed that this was also true even if the experimenter *explicitly* said that he was trying to be more persuasive. However, this was only true for people with low NFC, which reinforces the idea that they rely on heuristic cues to such a degree that likeability becomes a greater persuader than the information itself (ibid.). Recall, that we have argued that people use different processing modes to fit their own selfish needs. This fits very well with this study, considering that people with low NFC *prefer* to process information heuristically.

Even though people might have different preferences when it comes to processing information (low NFC vs high NFC), there might be more to it. Wood and Kallgren (1988) proposes that variables such as motivation (or lack thereof) and cognitive capability are also major factors when it comes to understanding how people process information differently (Wood, W., & Kallgren, C., A., (1988), Communicator Attributes and Persuasion: Recipients' Access to Attitude-Relevant Information in Memory). Wood and Kallgren (1988) proposes that the reason for people preferring low NFC might be due to the fact that they are simply not motivated to process the information about the specific topic *or* they might simply not have the cognitive capability to process the information systematically. They call this phenomenon high- or low-retrieval where the latter is when someone is not motivated or cognitively able to process information systematically (ibid.). In order to find out whether this was actually the case, they conducted a study with 107 participants. In this study, the participants had to answer questions about a specific topic through a questionnaire. The purpose was to show that likeability affects low-retrieval subjects, but not high-retrievals. The results suggested that motivation and/or cognitive capability indeed affected whether people had low NFC or high NFC. Ultimately this meant that people with low-retrieval were persuaded by likeability to a larger degree than people with high-retrieval (ibid.).

Mood

Even though NFC seems to be affecting information processing to a large degree, when it comes to persuasion in relation to likeability, it turns out that a other elements also affects

information processing and thus likeability and persuasion. Sinclair et al. (2010) proposes that mood is *also* important when it comes to persuasion. Recall that NFC to a large degree is affected by motivation and/or cognitive ability. However, Sinclair et al. (2010) argues that this is not the case with mood, as it can not be explained through the same mechanisms (eg. cognitive capability or capacity). Instead, he argues that source likeability is affecting people differently depending on their current mood (ibid.). Their research suggests that when people are in a good mood, they tend to not process messages thoroughly. He argues that this is due to the fact that when people are in a good mood, they want to maintain that current state of mind. This means that if a person in a good mood is exposed to information that might affect their current mood *negatively*, they tend to protect themselves against this by processing information heuristically. However, if the information could potentially *improve* or *maintain* their mood, they tend to process it systematically. A likeable source can thus potentially serve as a cue to maintaining the good mood, which ultimately will make the receiver process the message from the likeable source in a way that will potentially enhance their mood. This is an interesting finding, considering that likeable sources in general have been believed to be persuasive in a context of heuristic information processing. This is not the case as long as the receiver wishes to maintain or get into a good mood. In other words, people are able to use the two types of processing based on what currently fits their selfish needs.

There is a term known as the *social induction of affect,* which we have not yet described in this paper. The term states that people's current emotional experience has the power to affect other people's emotional experience (Wróbel M. & Królewiak, K., (2015), Is your mood more contagious if you are likeable? The role of liking in the social induction of affect). That is, if someone is feeling happy, his or her mood is to some extent contagious. However, what makes this term particular interesting is the fact that likeability has the power to *reinforce* its effect. Wróbel and Królewiak (2015) showed how this was the case in a study using 80 participants. The study had four different experiments. In the first one, the participants were exposed to a likeable communicator, who displayed *happy* emotions. In the second experiment, the participants were also exposed to a likeable communicator, however this time he was displaying *sad* emotions. In the third experiment, the participants were exposed to a dislikeable sender, who like in the first experiment displayed happy emotions. In the fourth experiment, the participants was yet again exposed to a dislikeable sender, however this time

he was displaying sad emotions. The goal with this setup was to find out whether likeable senders were more contagious (emotionally), than dislikable ones. The results suggested that people are in fact affected *more* if the communicator was perceived as likeable in opposition to dislikeable. In short, if the communicator was perceived as likeable, his mood would also be more contagious. This was also true if he was displaying sad emotions (ibid.).

Accessibility

Source likeability has been a topic of great interest for a long time, since several experiments have shown that source likeability is persuasive. According to Roskos-Ewoldsen and Fazio (1992), source likeability is when someone is linking an affective evaluation to a source (Roskos-Ewoldsen, D. R., & Fazio, R., H., (1992), The Accessibility of Source Likeability as a Determinant of Persuasion). In other words, it is when someone is perceiving someone or something as being likeable. Roskos-Ewoldsen and Fazio (1992) therefore set out to investigate the effect of likeable sources in communication. In order to do so, they conducted a study with 111 participants, with the purpose of examining whether or not source likeability had an effect on persuasion. The participants had to rate different celebrities (likeable sources) on a scale, and received a questionnaire afterwards. The test group was then presented a range of messages (opinions) from a celebrity, and it was tested whether or not they agreed with these opinions. The results suggested that likeable sources indeed had an effect on persuasion. The reason for this was that source likeability worked as an argument enhancer. That is, when someone is likeable, his or her arguments become reinforced by our perception (we perceive the person as being likeable). Roskos-Ewoldsen et al. (2002) went on to investigate this further in a new study. In this study they looked at how the effect of source likeability differs depending on whether the topic is of low- or high involvement. They also took account for how accessible the source likeability was to the participants. In order to do so, 71 participants had to rate fifteen different celebrities. However they were asked to rate five of them in *greater* detail. Ultimately, the participants read a message from one of the celebrities, and the researchers measured the persuasive effect based on this. Recall that Chaiken (1980) has previously argued that there is a general tendency for people to be persuaded as a result of source likeability, primarily when the particular topic is of low involvement to the person. This is due to the fact that people with high involvement tend to use a systematic approach when they process the information. In other words, if the topic is

important to them, they spend more time thinking about it, and classic persuasion strategies such as source likeability are thus necessarily not able to work as a persuader. On the contrary, when the topic is of low involvement, people tend to rely more on likeability cues, since they tend to process the information heuristically instead (Chaiken, 1980). Nonetheless, the research by Roskos-Ewoldsen and Fazio (2002) suggests that source likeability actually *does* affect persuasion regardless of whether or not the information is processed heuristically or systematically. It does so by affecting how the *strength* of the arguments is perceived by the message receiver. However, it requires that the arguments used by the communicator are strong. If they are strong *and* the communicator is perceived as likeable, the arguments will be perceived as even stronger, meaning that likeability strengthens the arguments. However, if the arguments are weak, likeability has little effect in persuading the receiver (ibid.).

Dislikeability

Even though the strengths of arguments seem to play a role in whether or not a likeable source is able to persuade, it nonetheless turns out that a likeable source is in fact more persuasive than a *dislikeable* one. To show how this was the case, Smith and De Houwer (2014) conducted a study with 87 subjects. They wanted to test whether a likeable source is more persuasive than a dislikeable one. To do so, they asked the subjects to form an impression of a communicator, based on whether he was likeable or dislikeable. This was done by simply telling the subjects whether or not the communicator was likeable or dislikeable before they completed an IAT and AMP (Implicit Association Test and Affect Misattribution Procedure). Their results suggest that a likeable source is in fact able to persuade/influence people more than a dislikeable one is (Smith & De Houwer, 2014). Not only did the subjects form a better impression of the communicator, the communicator was also able to directly persuade the subjects. This was tested by manipulating the perception of a professor so that the subjects perceived him as likeable. Then the professor presented a new concept called “comprehensive exams” to the participants, and managed to persuade them into thinking that such exams were a good idea. However, this was only possible if the perception of the professor was manipulated into being likeable. If he, on the other hand, was perceived as dislikeable, he was not able to persuade the participants into talking in favor for the comprehensive exams (ibid.). Recall, that people with low NFC rely more heavily on likeable cues, making them process information heuristically, ultimately making it easier for

a likeable person to persuade them. Since this study does not distinguish between whether or not the subjects were low- or high NFC, it can be questioned whether or not this particular study would produce the same result if one was to make sure that all the participants were high NFC.

Similarity

Recall, that similarity is one of the strongest traits when it comes to creating likeability. This is also why similarity is a fundamental part of our SHIRT framework. S being "Do wear the ***s***ame clothes?". We argued that wearing the same clothes created a feeling of similarity, which in turn created the perception of likeability. Silvia (2005) did a study showing exactly how powerful similarity really is. Specifically, he did two different experiments to test how similarity can increase compliance (persuasion). To do so, he used a total of 112 participants. 62 very put in one group, and 50 were put in another group. The experiments were exactly the same, except for one major change. In the first experiment, the subjects had to read different essays. The essays were manipulated so the sender of the essay either did or did not share the same name and/or birthday of the subject. In the second group, the communicator was sharing the same values with the subjects rather than sharing the same name and/or birthday (ibid.). The study sought out to investigate how this manipulation of perceived similarity (names, birthday and/or values) did in terms of persuasion (compliance). This is pretty interesting, considering that most people are familiar with people who are sharing the same name. However, few people probably think about which consequences this namesharing has. The results of the study suggested that having these things in common do in fact create a feeling of similarity, which in turn leads to likeability. Specifically, the experimenter was able to make the subjects agree with him, if they were feeling similar based on name, birthday, or values. In other words, if you share the same name (or birthday, or values) with another person, you will also tend to like this person more, which ultimately (potentially) leads to persuasion (ibid.).

Attractiveness

Another major trait leading to likeability is attractiveness. Recall, that this is both physical attractiveness (as seen in the SHIRT framework, H is for "is this person ***h***ot?") as well as key traits such as warmth and friendliness (Chaiken, 1980; Chaiken & Eagly, 1983). In other

words, if you *perceive* someone as being either warm or friendly, you will most likely perceive this person as being attractive, which ultimately leads to you perceiving the person as likeable. According to Wachtler and Counselman (1980), we are much more likely to agree with (be persuaded by) people, if we perceive them as attractive. They showed how this was the case through a study with 56 participants. Each participant was divided into a group consisting of two people in total (dyads). The participants job was to discuss a specific legal case. However, the researchers manipulated the perception of the subjects partner by telling the subject that his/her partner was either cold or warm (leading to the perception of more or less attractiveness). The participants then had to present opinions, and ultimately write them down on a piece of paper, which was analyzed by the researchers. The results suggested that if the participants were manipulated into perceiving their partner as warm (attractive), he/she would tend to agree with the arguments presented by their partner (persuasion) (ibid.). In short, this means that if a person perceives someone as being attractive, there is a higher chance of being persuaded by the attractive source.

No effect

Even though it is tempting to believe that likeability always leads to persuasion, it turns out that this is not always the case. Sometimes likeability has no effect at all, and sometimes it can even have a *reverse* effect. Brownlow (1992) conducted a study showing that likeability not always work as a persuader (Brownlow, S, (1992), Seeing is believing: Facial appearance, credibility, and attitude change). In this study, she used 128 participants and sought out to see if a likeable speaker would be able to make the subjects agree with her. After the participants had watched the speaker, Brownlow measured how much they agreed with the speaker using a 9-point scale. Based on the previously presented litterature, it would be reasonable to assume that people would tend to agree with the speaker more if she was likeable. However, this was *not* the case. She used four different speakers to demonstrate that likeability was not sufficient to make the audience agree with the speaker. In fact, it turned out that whether or not the speaker had a "babyfaced" look was a much stronger predictor than likeability, when it came to making people agree with the speaker (ibid.).

Lyttle (2001) also showed that likeability is not able to guarantee persuasion (Lyttle, J., (2001), The Effectiveness of Humor in Persuasion: The Case of Business Ethics Training). He showed how this was true in regards to credibility. According to his research, likeability

cannot influence source credibility, meaning that even though a person is perceived as likeable, this does not mean that he will also be perceived as credible (ibid.). Interestingly, this is contradicting the findings by McLaughlin (2016). Recall, that his research suggested that credibility in itself leads to likeability (if the participants perceived the community members as being credible, they would also perceive the community as likeable). Nonetheless Lyttle (2001) conducted a study using 148 participants. He sought out to investigate how humor might lead to persuasion. This was based on the idea that humor makes us like someone or something more. Nonetheless, it turned out that even though humor did in fact create likeability, it did not work as a persuader (ibid.). However, this might be due to the fact that he used cartoon drawings, ironic wisecracks and self-effacing humor as the means to create likeability. This makes it hard to tell whether the participants only *liked* the humor and nothing else.

Reverse effect

The literature also has evidence that likeability can have a reverse effect. In other words, it might be possible to be *too* likeable. Rosstter & Smidts (2012) showed this in a study, where they used celebrities (Rossiter, R, J, & Smidts, A., (2012), Print advertising: Celebrity presenters). Specifically they wanted to see how well celebrities were able to persuade consumers into buying products. To test this, they used 172 participants who were divided into two test groups as well as a control group. They used the test groups to compare how different celebrities did across different product categories - That is, how persuasive they were depending on what products they advocated. At the end of the study, the participants had to evaluate the products in order to find out how effective each celebrity had been across different products. It would be reasonable to believe that the more popular (likeable) the celebrity was, the more products would he/she be able to sell. However, this was not the case. In fact, it turned out that being too likeable, could have a reverse effect (ibid.). The researchers believed that if a celebrity advocated a product that the participants actually liked, it would enhance this very liking effect and ultimately increase the probability of persuasion (buying the product). However it turned out, that this was not the case. They argued that when a person (such as a celebrity) is *too* likeable, it reverses the effect. They believed that this was due to the fact that people are suspicious, when they encounter a person that is *very* likeable. When someone is too likeable, it seems to lower his/her trustworthiness (ibid.).

Recall, how people adapt to advertising over time (the advertisement evolution). This might explain why being *too* likeable has a reverse effect - people have learned that likeable celebrities are used to promote products as a way of manipulating people.

Information processing

In this section, we want to dive deeper into the research on information processing on which this paper (and especially Step 2) builds on. First, we will introduce the reader to several peer reviewed articles, explaining how the studies were done, their limitations, and results. The purpose is to give a more thorough understanding of the research and theory behind information processing. Then we will go in depth with the term, heuristics, in the eyes of some of the most influential theorists in this area, Gigerenzer and Kahneman & Tversky.

Research articles

The following is a brief overview of the empirical research articles on information processing on which this paper is built. The research articles included here are those which the authors found the need to elaborate further than what was done in the article. The purpose is to create transparency by making the research easily available to the reader. The structure will be a brief presentation of the study, starting with the aim of the experiment, the subjects included, the procedure used, and the result(s). Lastly, to sum up the section on research articles, we comment briefly on the use of information processing while including other relevant studies.

Yoon et al. (2011) investigated how subjects selectively process information by relying on attitude-consistent information. This was done through a number of studies (Yoon, Y., Sarial-Abi, G., Gürhan-Canli, Z., (2011), Effect of Regulatory Focus on Selective Information Processing).

Study 1 was conducted with 87 subjects from the US, who were told that they would be talking about their life, preferences, and focus manipulation. Participants received a regulatory focus manipulation and were then told to read about a new product and included consumer comments. They found that subjects rely more heavily on positive information when information load is high *and* the message is promotion-focused. On the other hand, when the message is prevention-focused (and the information load is still high), subjects rely

more heavily on negative information, thus evaluating brands lower (negative reliance) or higher (positive reliance).
Study 2 included 90 participants from the US and was to a large degree identical to study 1 in terms of procedure. What was tested was alternative explanations for the conclusions made in study 1. Here, the question of existing brand associations and their effect was shaped. The proposed explanation was that favorable existing brand associations makes for positive expectations and thus affects how the subjects selectively process the information. The same goes for less favorable existing brand associations that make the subject rely more heavily on information that confirms these associations.
In study 3, 97 participants from the US were randomly assigned in a 2x2 experiment. The 2x2 structure was defined as *high vs. low information load* and *promotion vs. prevention regulatory focus*. The results confirmed the alternative explanation of study 2, and they found that existing brand associations activate a promotion- or prevention focus.
Lastly, 78 participants from the US were included in study 4. The procedure and structure were the same as in study 3, and the result further confirmed the result of study 1 and how the findings are robust across product categories.

Thompson and Hamilton (2006) investigated how the format of an advertisement has to match the consumer's mode of information processing to enhance effectiveness. This was done through two studies of which one of the studies was divided into an "a" and a "b" part (Thompson, D. V., Hamilton, R. W., (2006), The Effects of Information Processing Mode on Consumers' Responses to Comparative Advertising).
Study 1a consisted of 89 undergraduates, who were randomly assigned to a 2x2 design, with the measures being *processing instructions: analytical vs. imagery processing* and *ad format: noncomparative vs. comparative ad*. Participants were given a folder with instructions, a print ad, and a question booklet. From the ad, the participants in the imagery group were asked to rate the ease of creating mental images, imagine the brand, and how clear these images were. The participants in the analytical group were asked on the ease of considering brand features, and how clear the advantages of the brands were. The initial results of study 1a showed a positive effect when matching the ad format with the processing mode. In comparative conditions, analytical fluency was higher, and in noncomparative conditions, imagery fluency was higher.

Study 1b had the same procedure and included 83 undergraduate participants. The focus in this part of the study was to examine if the positive effect of matching ad format to processing mode could be transferred to the effectiveness of the ad (eg. brand evaluation or purchase intention). Results showed that noncomparative ads in the imagery condition increased brand evaluation and purchase intention. In analytical conditions, comparative ads led to increased brand evaluation and purchase intention.

Study 2 included 250 undergraduates who's processing mode was manipulated with ad executional cues. The design was a 2x2x2 with the measures *analytical cue: present/absent, imagery cue: present/absent,* and *ad format: comparative/noncomparative*. The rest of the procedure was identical to that of study 1a and 1b. Results showed that:

1) An imagery cue in a noncomparative format was more effective.
2) An analytical cue in a comparative format was more effective.
3) Comparative and noncomparative formats were equally effective, both when no cues were present and when both cues were present.

This was concluded to work as further evidence for matching ad format with mode of processing to increase effectiveness.

Kim, King, and Kim (2018) investigated the effect of contradictory brand information by looking at information processing strategies in regards to processing brand information and the motivation behind (Kim, K., King, K. W. & Kim, J., (2018), Processing contradictory brand information from advertising and social media: an application of the multiple-motive heuristic-systematic model). The experiment was done online, and the sample consisted of 502 undergraduates who were divided in groups in a 2x2x2 design. Measures being *involvement: high vs. low, cue valence: positive vs. negative,* and *argument valence: positive vs. negative*. Participants received the stimulus brand information and answered a questionnaire. The study showed that when subjects received multiple pieces of information, and the motivation for accuracy and personal involvement was high, it resulted in higher engagement in concurrent information processing. The study also showed that both cue-related and argument-related thinking affected individual's thinking. Individual's motivation for processing also affected the type of information processing used.

Van Strien et al. (2016) investigated information processing and the influence of attitude strength (ibid.). The experiment included 79 German university students, who were told to do research on a given topic before the experiment and fill in a questionnaire on the topic. For the experiment they should read information on the same topic on a website. Afterwards, they were asked questions on the topic and should include arguments from the website. Results showed that disconfirmation bias was not likely for participants with high attitude strength who allocated the same amount of attention to attitude-consistent and attitude-inconsistent information. The results also showed that participants with weak prior attitudes spent more time on attitude-inconsistent information.

Ending notes on research articles

The relation between information processing and the persuasive effect of likeability has been of interest for many researchers. A common belief is that heuristic cues influence persuasion when the subject is faced with a topic of low consequence and/or low personal involvement, and that these cues may be activated by likeability (Chaiken, 1980). This is also the case when subjects are faced with a lack of arguments or information, which will make them default to heuristic cues. Source likeability (cues) are thus a highly relevant factor (Chaiken, 1980; Roskos-Ewoldsen et al., 2002).

The general view on information processing used in this paper is that individuals have different processing tendencies (Reinhard & Messner, 2009; Sinclair et al., 2010; Stone, V., A., & Hoyt, J., L., (1974), The Emergence of Source-message Orientation as Communication Variable; Ferran, C., & Watts, S., (2008), Videoconferencing in the Field: A Heuristic Processing Model). This distinction between tendencies can be referred to as high- and low-retrieval recipients (Wood & Kallgren 1988). Stone and Hoyt (1974) points out that neither systematic or heuristic processing leads to greater persuasion (ibid.). Instead, the individual tendency of need for cognition (NFC) can explain difference in persuasive effects. In general, people with high NFC rely more on systematic processing, while people with low NFC rely more on peripheral cues (heuristic processing) (Ferran & Watts, 2008).

These individual tendencies also show in the person's self-view. According to Aaker & Lee (2001), people with an independent self-view are more persuaded by promotion-focused information, whereas people with an interdependent self-view are more persuaded by

self-regulatory information. Furthermore, people with an independent self-view generally have a desire to achieve and succeed relative to others, whereas people with an interdependent selv-view generally have a desire to belonging and fulfill obligations. This means that a it is "easier" to persuade a person with an independent self-view through information that aligns with his/her desire to succeed, and at the same time, it is easier to persuade a person with an interdependent self-view by aligning the information with the desire to belong.

The article also states that the processing mode (heuristic or systematic) does not determine the persuasiveness in itself. Aside from the element of NFC, it turns out that people are more/less likely to be persuaded depending on whether or not the persuader *matches* the processing mode that the person is currently in, as Thompson and Hamilton (2006) found. In other words, the persuasive power of the communicator's likeability is very much affected by the receiver's current processing mode.

Heuristics

The fact that people rely on heuristics is commonly accepted in the field of information processing. Humans do not make judiciously and deliberate (rational) choices at all times, but instead rely on a number of heuristics that are able to reduce complex decisions. However, there are different ways of explaining both *how* and *why* these heuristics work as they do.

Kahneman & Tversky

According to Kahneman and Tversky (1974), considering every possible outcome when making a decision, would take too much cognitive energy. Therefore, people rely on a limited number of heuristics (Tversky, A., & Kahneman, D., (1974), Judgement under Uncertainty: Heuristics and Biases). Heuristics er thus a number of strategies, which have proven to work in former, similar situations. However, Kahneman and Tversky (1973) believe that heuristics are limited in the sense that they can lead to an illusion of probability (Tversky, A., & Kahneman, D., (1973), Availability: A Heuristic for Judging Frequency and Probability). This is due to the fact that no situation is exactly the same and the individual do not take new variables into account.

An example of this illusion of probability is the experiment of heads and tails. Most have a tendency to believe that it is more likely to get HTTHTH than HHHTTT, even though the probability is exactly the same. It is the heuristic of random order that comes into play, and the outcome HTTHTH looks more random (ibid.). This is what Kahneman and Tversky refer to as a system failure and it occurs when the representativeness of a heuristic is not affected by other factors than itself (statistics for instance) (Kahneman & Tversky, 1974). Ultimately, this leads to the illusion that something is more probable than it really is (Kahneman & Tversky, 1973).

In this way, the representativeness of heuristics can be affected and thus the outcome of information processing will be affected (this is referred to as the secondary effect): ”If the description of the company is very favorable, a very high profit will appear most representative of that description” (Kahneman & Tversky, 1974, p. 1126). This effect is so strong that people who rely solely on presented information will be less affected by counterarguments. In other words, the representativeness of heuristics are not effectively influenced by additional factors that might have more directly impact on the topic than factors on which the heuristics are built.
Aside from representativeness, the availability of heuristics is also essential to Kahneman and Tversky. Put simple, some heuristics are more accessible in memory than others, and therefore they are used more frequently (Kahneman & Tversky, 1973).

The flaws of heuristics are made visible in Kahneman and Tversky’s (1981) experiment on decision frame. By using a certain frame (providing information in a specific way), the representativeness and availability of heuristics can be manipulated (Tversky, A., & Kahneman, D., (1981), The Framing of Decisions and the Psychology of Choice). The focus of this experiment is to show that humans are not rational and acting in a logical way (eg. the utility model). Instead, they believe that humans constantly and systematically act in inexpedient ways.
Participants were asked to voice their opinion on a thought scenario. 152 subjects were asked to choose between:

A) Save 200 people

B) ⅓ probability that 600 people die, and ⅔ probability that no one will be saved

Here, 72% percent choose option A.
However, when the other group of subjects were faced with the following choices:

C) 400 people will die
D) ⅓ probability that 600 people will be saved and ⅔ probability that no one will be saved

78% choose option D, despite the fact that A & C and B & D are statistically identical (ibid.). In this way, the frame affected the participants decision by exploiting the representativeness and availability of heuristics.

Gigerenzer

Gigerenzer (2001) agrees on many aspects of Kahneman and Tversky's view on heuristics. However, in contrast to Kahneman and Tversky, Gigerenzer does not view heuristics as a cognitive limitation (ibid). Rationality is a concept that is hard to fully grasp, and Gigerenzer therefore instead builds on Herbert Simon's term, bounded rationality, which mixes rationality and psychology to a larger degree. In short, bounded rationality is seen as an adaptation, and simple heuristics are a part of this adaptive behaviour. The infamous example is that of a robot that should catch a ball. Simply put, one team of engineers make all the "rational" calculations for the the robot, which includes all the factors that affect the path of the ball. Another team of engineers programs the robot to only focus on *one* factor, the angle between the eye and the ball (just as a person would do). The point of the thought experiment is that these sophisticated, rational calculations are not necessarily made quick enough to react suitable for the time frame of the situation, making simple heuristics an advantage in certain environments (ibid.).
Gigerenzer (2001) refers to this as the adaptive toolbox of evolution, and thus heuristics are tools (read: useful). He characterises heuristics as a collection of rules that are fast, frugal, and requires less cognitive energy. They are adapted to the environment, physical or social, past or present, and function "under the constraints of limited search, knowledge, and time" (Gigerenzer, 2001, p. 8)

In the following section, we will look at how heuristics are adaptive in regards to time and information cost, the effect of emotions, and how heuristics may *also* be maladaptive in the eyes of Gigerenzer.

Fast and frugal heuristics

The general view of bounded rationality is that humans are not bounded by internal constraints, but instead by constraints in the external environment. Simple heuristics are therefore not a cognitive limitation, but rather an adaptive (fast and information-frugal) behaviour that match the challenge at hand, based on former experience. In this case, heuristics can perform nearly as well as algorithms that rely on more information.

The passage of time is the most important factor when it comes to shaping cognitive evolution from the external environment. In general, the slower animal (or individual) has a disadvantage, and the faster animal may for example be able to gather (more) resources first. In this sense, time is also energy, and more resources mean higher likelihood of reproductive opportunities. Thus, time and energy are the central elements of the evolutionary cost-benefit analysis that shapes behaviour (ibid.).

Gigerenzer (2001) believes that the label of irrationality that heuristics have, can be challenged by looking at the quality of the decisions made by (with) heuristics. This quality is usually measured by accuracy, but this benchmark is not adequate, since perfect accuracy is not achievable. Instead, heuristics should be benchmarked against the practicality of the decision.

Emotions

In the article of this paper, the topic of emotion has been touched in regards to brand contentment in the Brand Likeability Scale, consequences and responses in Figure 1 by Maclnnis and Jaworski (1989), and personal bias. Ultimately, the article makes it clear that emotions *do* play a role in information processing. In this section, we will elaborate on the role of emotions to give the reader a more thorough understanding of its effect.

Emotions can tell the individual of his/her current position in (/relationship with) the surroundings (ibid.). Gigerenzer (2001) draws on the example of fear, which is an emotion

that is meant to warn us against a threatening environment. This in turn directs our attention to other environmental cues that might relate to this feeling (which can be compared to confirmation bias). This confirmation bias extends itself to future events, as the emotions make it easier to recall certain stored information in memory than other. The general influence of emotions thus stems from the belief that decision making embodies an assessment of the future (prognostication), and the most reliable way of doing so is to draw on past experiences. More specifically, emotions are either rewarding or aversive, and thus they make the individual act to extend or terminate the circumstances from which it origins (ibid,).

Emotions influence on decision making extends to the cost-benefit analysis, and specifically emotions such as pride and shame can affect approval-seeking behaviour, such as risk-taking. Risk-taking is also adaptive, and therefore the probability of future opportunity (predicted based on past experience) affects it. It is this kind of goal-oriented behaviour that creates adaptive advantages - if it did not, evolution would have evolved in another direction.

Maladaptive behaviour

Emotions are an element of (former) adaptive behaviour that may not always be as adaptive anymore. Gigerenzer (2001) proposes that men murdering each other over trivial things when a girl is watching, is a reaction based on mating opportunity for our ancestors. However, today, this behaviour (that tries to get rid of an aversive feeling) does not increase mating opportunity and thus it becomes maladaptive. In general, it seems that when individuals have intense emotions of shame or anger, the cost-benefit analysis is overruled - the focus is solely on the benefit, whatever the cost. In this sense, we believe that it is fair to assume that emotions have the ability to both create and overrule heuristics.

Emotions can also influence behaviour in other ways. The more sensitive an individual is to the expectation of others, the more likely the person is to conform to them. Gigerenzer (2001) explains this with the assumption that participation in cooperative endeavors is an evolutionary adaptive behaviour, rank-striving. This behavior is adaptive since it promotes social expectations such as conformity and norms (which we already touched on in the article). However, this behaviour can be both adaptive (fitting in) and maladaptive (showing off in a way that is not appealing) (ibid.).

Ending notes on heuristics

As mentioned in the introduction to this section on heuristics, both the concept of heuristics and how they function is commonly accepted. The difference between Kahneman and Tversky's view and the view of Gigerenzer, essentially comes down to whether heuristics are adaptive or maladaptive. As the work of Gigerenzer (2001) used in this paper is of newer date, he has (and uses) the opportunity to refer to the work of Kahneman and Tversky and criticize it for its maladaptive view. Contrary to Kahneman and Tversky, Gigerenzer presents a view on heuristics as an ability that would not have survived evolution if was not an enabler of adaptive behaviour.

Finally, even though it is not directly mentioned by Gigerenzer himself, we argue that he presents the arguments that lay the foundation for emotions creating maladaptive behaviour.

Elaborated cultural perspective

In this section, we will elaborate on theoretical views that relate to the article's Step 3. This elaboration includes the perspective of context-based knowledge that we left out of the article, a more thorough examination on the view of Bruner, and the theoretical knowledge of Valsiner, which shaped the thoughts of this article.

Context-based knowledge

In the article, it was made clear that information processing does not work in silos, but is very much affected by cultural environments, both physical and social. In this section, we will look towards Krivic and Guid (2020) to further elaborate on this information and give the reader a perspective that was left out of the article (Krivec, J. & Guid, M., (2020), The influence of context on information processing).

According to Krivic & Guid (2020), there are different types of contexts that influence information processing and therefore also the power of likeability. Some of these types include (ibid.):

Dispersion.

The distance between the object being processed and the person processing it.

Complexity.

How complex the information is.

Information Deviation.

The tendency to use either sensory data or prior knowledge of the stimulus when processing the stimulus.

Information positivity.

The tendency to favor positive stimuli over negative stimuli when processing information.

From their study on the influence of context, results showed that information is *better* processed if the context is high positivity (positive information), have low dispersion (close distance to what is being processed) and low complexity (the information is easy to understand).

However, the influence of context is twofold. Recall, that according to the studies presented in Step 2, *less* knowledge would incline the receiver to rely on other available information cues (for example source likeability cues), thus making the context *more* influential. Nonetheless, Krivec and Guid (2020) found that context has a *greater* influence on information processing, if the person being influenced already has a *large* background knowledge on the topic that is being given information on. This is explained by the fact that people with less background knowledge have less information to influence them (ibid.). However, it is important to note that their study was conducted on a very specific target audience (chess players) who had very specific knowledge in a given field, which differs them from "ordinary" people.

Consider for instance, if a medical professor was to tell an "ordinary" person about a new study regarding epigenetics. He would not be able to influence the "ordinary" person, because the person simply would not know what the medical professor was even talking about in the first place. In other words, we propose that the lack of background knowledge

creates a communicative disconnection (a knowledge gap), and the "general" rules of persuasion (including likeability) do therefore not apply.
Consider then what would happen if the medical professor were to discuss the study with a fellow medical professor, who had major background knowledge as well. The knowledge gap would be closed, as he would have enough background knowledge to understand the topic, which would put him a position where the "general" rules of persuasion and likeability *would* apply, making likeability a powerful factor yet again.
We therefore argue that a communicative connection (sufficient background knowledge from both parties) is a necessary foundation for activating the "general" rules of persuasion (and likeability). The same rules apply for both brands and people in a persuasive context, meaning that they would have to communicate their message with sufficient knowledge matching the knowledge of the receiver.

Bruner

Not only is Bruner's work included in this paper, but the development of his (more or less) personal perspective has also influenced the development of the Model of Embedded Processing. Bruner started out as a cognitive scientist, and this is especially visible in his work, A Study of Thinking (1956) (Bruner, J. S., Goodnow, J. J., & Austin, (1956) G. A., A Study of Thinking).
In the following we will present the perspective of cognitive science and how it (in the eyes of Bruner) has developed into a cultural psychology.

Cognitive science

According to Bruner (1990), cognitive science seeks to find out how individuals create meaning from their surroundings (Bruner, J. S., (1990) Acts of Meaning). This meaning-making happens through information processing. Individuals used their surroundings to process information and this imply that information consist of pre-coded messages that are embedded in a system of categories. In that sense, the meaning of the message is predetermined and the goal of information processing is to decode the information. This process include the information to be arranged and combined with other

acquired information, stored in the individual's memory. In other words, all information is processed the same way, no matter what type of information it is (Bruner, 1990).

Language in cognitive science

According to cognitive science, language can be controlled in a way in which the meaning of a message can be passed on unaffected, as long as the receiver is able to correctly decode the information. Since information can be controlled, cognitive science deals with input and output, and the computational analogy is often used to describe the human mind and the processing of information. This analogy implies that information processing consists of predetermined meaning-categories within certain domains, which makes the ground for coding and decoding information. With this *computability* the cognitive capabilities of humans are compared to computer programs, and thus it becomes important that the individual is able to run these programs (eg. memory). This means, that in an ideal situation where meaning-categories are of the right size and form, decoding information becomes easier (ibid.).

Based on the reduction of messages to coding and decoding, informative message are thus those that exclude or reduce alternative choices in the decoding fase, which makes the message easier to decode correctly.

These symbolic means (eg. language) are used in the individual's constant search for meaning. However, in cognitive science, meaning should solely be understood as factual meaning (eg. lexical meaning). This is due to the fact that cognitive science has no room for intention, belief, and desire, which means that mental conditions cannot be the cause for anything happening in the physical world. This type of subjective mind is viewed as a byproduct of the computational output - a way for the individual to refer to his/her behaviour after it happened (ibid.).

Categorisation in cognitive science

In his work, A Study of Thinking (1956), Bruner states that there are theoretical conditions that cognitive science intentionally does not deal with. This is due to the fact that the field believe the analytical processing of information (including grouping of surrounding objects based on predefined symbols) is of bigger importance.

The individual categorises his/her surroundings to reduce complexity, and through this

categorisation the individual comes to identify the surrounding objects. When an object cannot be identified, a feeling of fear will arise, and thus the object *will* be categorised (as fear). In other words, categorisation makes it possible to group related events with each other, and in this way, the individual creates meaning from grouping of events and words (ibid.). Cognitive science believes that objects have essential qualities and proportions, which locate their identity categories, and when individuals refer to different objects as being roughly the same, this is referred to as equivalent grouping. Thus, individuals rely on their knowledge of certain categories in an effort to deal with new categories (ibid.).

There are mainly three types of categorisations: affective categories, functional categories, and formal categories (ibid.). These categories overlap, but can be defined as following:

Affective categories

Some categorisations are dependent on whether an object is placed in a category that induces the same affective response. In that sense, objects that induce an affective response are not necessarily defined based on the physical appearance. However, according to cognitive science, affective and linguistic categories do not correspond. Instead, affective categories rely on experiences from childhood, before linguistic abilities were developed, and they are therefore not affected by verbal insight.

Functional categories

Categories of functional character are created on the basis of their external function. Objects in this category fulfill certain tasks or goals. This might be objects that fulfill physical conditions and functions and therefore have a physical purpose, but it can also be on a metaphysical level.

Formal categories

This type of categories are created by specifying the inherent qualitative proportions of an object. This is defined based on the already-categorised objects in a given category. This type of category is characterised by the fact that it can describe diacritical signs found in a group of objects that not by themselves are able to describe their use. For example, the same word can have different meanings in different contexts, and thus the same word is defined differently in different contexts, and maybe even categorised differently as well.

Cultural psychology

In Acts of Meaning (1990), Bruner states that cognitive psychology has become a cultural psychology. Folk psychology is one of the main reasons why psychology has to deal with culture. Folk psychology includes theory of mind and is incorporated into the language and everyday life. And language is exactly one of the tools granted by culture. In other words, information is not sent or received in a static flow, processed by each individual, but the communicated information and the processing of it are affected by the given culture.
This separates cultural psychology from the former cognitive science, and thus Bruner emphasises the possibility of different interpretations of meaning based on different cultures. He does so while criticising how cognitive science did not look at *how* meaning is created, which in fact can be answered by looking at culture and its constituting role. In other words, Bruner believes that cognitive science has been too focused on the individual and neglected the role that culture plays in functioning and adaptation. In reality, the individual is a reflection of the culture (ibid.).

Bruner also emphasise *intention*, which is externally focused and affects the categorisation of an action. This is especially visible in what he refers to as the relationship between saying and doing (ibid.). Here, a discrepancy between what is said and what is done can be justified by revealing the intention of what was done. However, it is not only the externally focused intention that is important to Bruner. He believes it is equally important that cultural psychology deals with what individuals *say* what they did, what made them do it, what others do, and thus map out how individuals describe their physical reality.
Bruner (1990) refers to this cultural psychology as a pragmatic constructivism. Pragmatism leads the individual to consider the surroundings that have created certain beliefs and duties. In this sense, values are dependent on and created by culture, and they fulfill necessary functions in certain cultures. They are a part of the individual's identity, but at the same time they help locate the individual in a specific culture (ibid.).

Opposingly, following the view that a pragmatic constructivism leads the individual to consider the surroundings that have created certain beliefs and commitments, makes it unnecessary to enlighten the reader on cultural context in the first place (meaning: to include Step 3), since this happens automatically. We agree with Bruner on the fact that processing of

information is automatic and pragmatic; however we argue that the reflection of one's own relation to culture and vice versa is not automatic and pragmatic in its nature, making it necessary to include Step 3.

Valsiner

Our general (the researchers of this paper) understanding of cultural information processing stems fra Valsiner's work, An Invitation to Cultural Psychology (Valsiner, J., (2014), Cultural Processes on the Borders: Constructive internalization and externalization). In its essence, humans deal with decision making in the context of meaning-making, which is why cultural psychology and Valsiner are relevant topics. In the following, we will present an overview of Valsiner's thoughts on this meaning-making process as an internalization/externalization happening on the "border", where the individual meets (and partly becomes) the surrounding environment (culture). Note that we believe, this process can be compared to information processing.

Internalization and externalization

The internalization/externalization can be seen in the human-sign relation. Humans create signs and use these signs to create meaningfulness in their surroundings and thereby to create themselves. This relationship between the person and the world is said to exist between two infinities, which is visible in the figure, *Quadratic unity* of INSIDE<>OUTSIDE and PAST<>FUTURE:

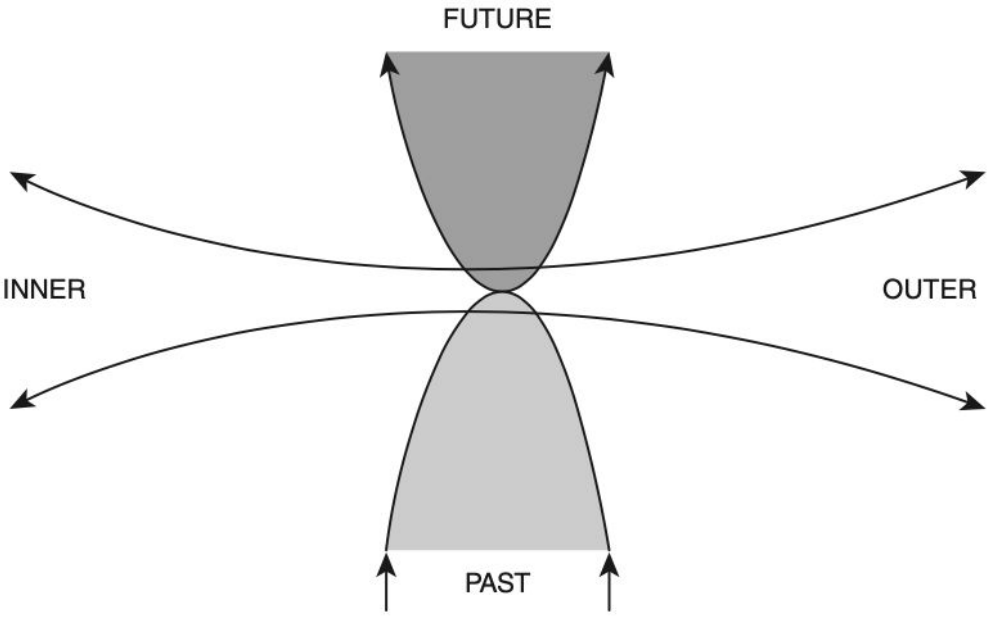
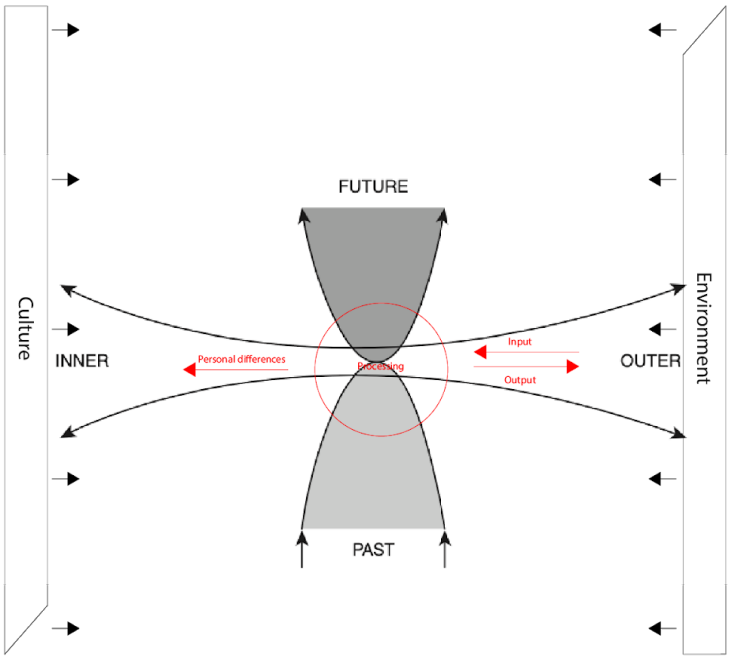


Figure 4.2 Quadratic unity of INSIDE<>OUTSIDE and PAST<>FUTURE

This is the separation of INSIDE and OUTSIDE of the person, and psychological phenomena happens in the middle of the figure – where the past, future, inner, and outer meet: the current present. Imagine a person in the middle of the model, always facing towards the future – obviously he/she carries his/her past. Both the present and the past is a product of the INNER and OUTER infinities that come from each side – and this is constantly happening. This description also resonates with Valsiner's statement, that we are always creating something new. And it is right here, in this position (where the inner and outer meets) that we want to put our focus (ibid.).

We have tried to illustrate the connection between the Quadratic unity of INSIDE<>OUTSIDE and PAST<>FUTURE figure and the Model of Embedded Processing here:



As you see, the input-processing-output happens in the present. The input and output in this case are OUTER responses (which can be compared to the time specific environment), and personal differences are a part of INNER (which can be compared to culture carried over time). This also illustrates how processing is a result of past experience, present conditions, and future expectations. In that sense, including Valsiner's figure 4.2 adds to the understanding of our model. However, this extra detail may not necessarily add to the explanatory power of the model, which we will elaborated in the Models section (See Annex, Models).

The internalization/externalization process

How the internalization/externalization works is best shown through the *Mutual Feed-forward relations of internalization and externalization* figure, 4.3. Here you see how the INNER and the OUTER affect each other. The creation of something new, may it be either in the INNER or from the OUTER, will guide the formations in the other. And from a brand point-of-view: The decision to invest yourself in a brand first has to come from the environment, but it is an *interplay* between the INNER and the OUTER (ibid.).

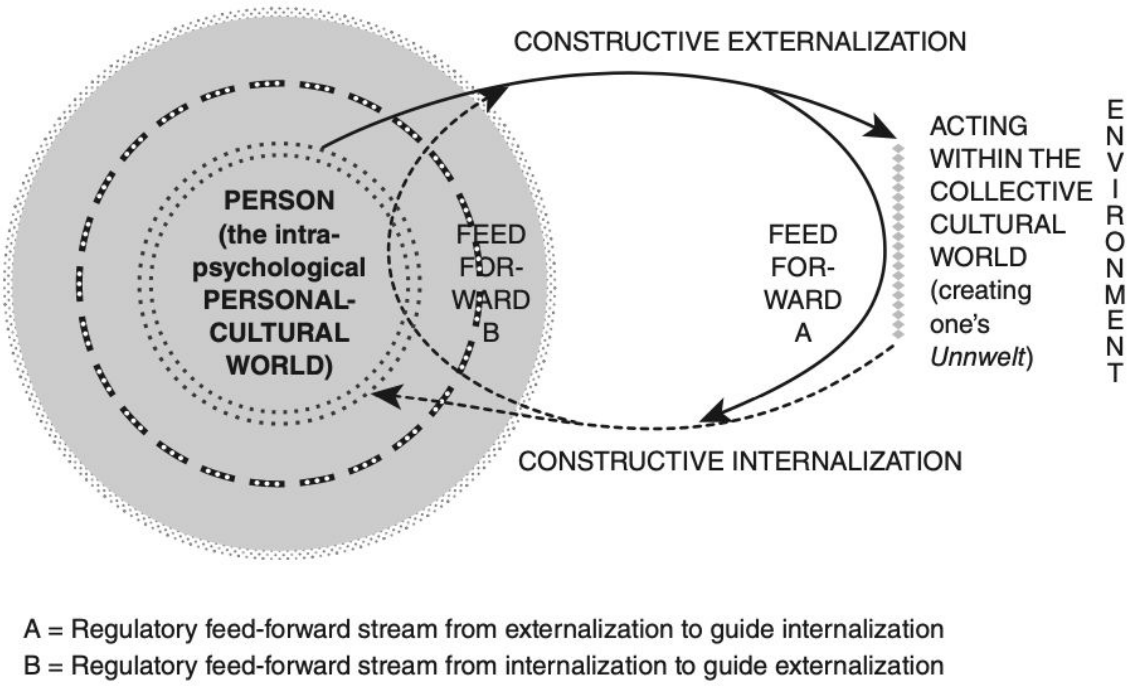


Figure 4.3 Mutual feed-forward relations of internalization and externalization

Layers

If we take a look at the *Laminal model of internalization/externalization as double transformation*, figure 4.4, we will see how the internalization process works (it is worth mentioning that the externalization process works the same, but the other way around): An incoming message is moved from layer 1 to layer 2 to layer 3. And in these layers, the initial message becomes transformed into a maintained, generalized, and integrated message, in that specific order, corresponding to each layer (ibid.).

For the relevance of the paper, we will look at the layers in figure 4.4 from a commercial perspective. This is done to add perspective to the cognitive approach to processing used in the paper, since this figure represents a pure cultural aspect to this. What is especially interesting in a commercial context is that the internalization/externalization process is constructive, which means that, what Valsiner refers to as "the inner core", regulates boundary crossings by a specific, social and semiotic, regulating device. In other words, the integrated transformation in layer 3 is where something becomes a "value" for a person, and thereby a part of that person (ibid.).

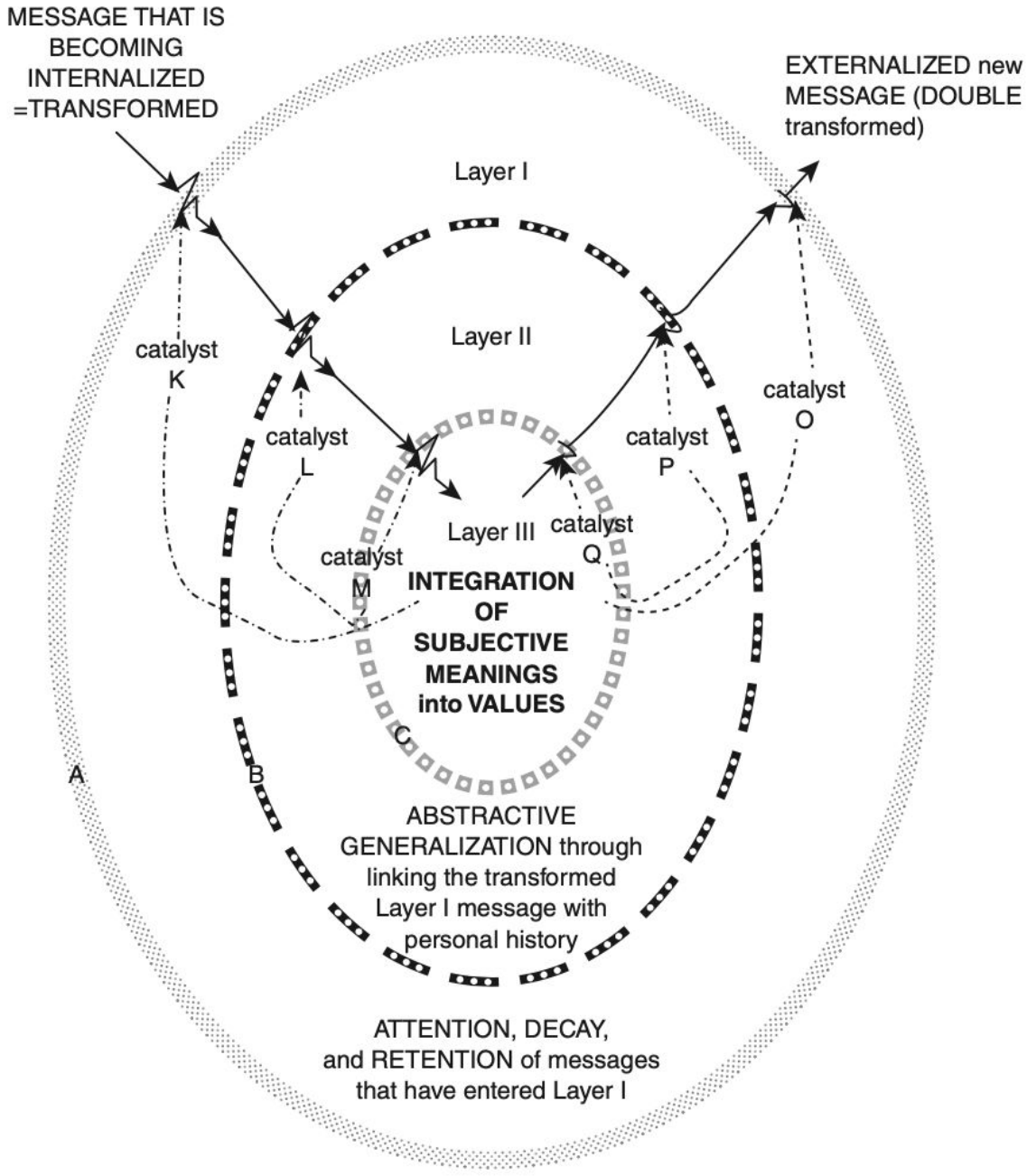


Figure 4.4 Laminal model of internalization/externalization as *double* transformation

Layer 1

Layer 1 is the field of non-voluntary attention. A poorly communicated brand message, will get ignored or blocked in this layer, while a less poorly communicated brand will only stay

here in layer 1 and get no further, due to the regulators. In this layer, we have the 'K' regulator, which function is to avoid stimulation overload.
This regulator selectively recognizes messages, which the person is ready to internalize, while blocking and ignoring others (ibid.). From a branding perspective there is a saying about "cutting through the noise" of all the brands advertising everywhere, which is basically what this process describes. We argue that it is in this layer 'brand awareness' happens.

Layer 2

If brand communication is maintained in layer 1, the next step for effective communication is to get into layer 2. This requires the opening of boundary 'B' with the help of the social regulator 'L', which performs a catalytic function. The message now goes from 'maintained' to 'generalized', with the help of cognitive heuristics. This is where a person has a generalized opinion on a topic – or here, on a brand – and can use this, debating with others (ibid.).
Reaching layer 2 is the most common for an effectively communicated brand or message: The brand has cut through the noise, and the person has not only maintained the brand message, but has formed a generalized opinion on it.
So, if we for example asked your opinion on Nike, you would have one, as they have communicated their brand quite effectively.

Layer 3

A few brands create cult followings. This is a sign of the brand reaching deeper than layer 2. For example, if you ask our specific opinion on Apple, we would feel a passionate, emotional connection to the brand. To reach layer 3, a message in layer 2 will have to be let through boundary 'C' with the help of social regulator 'M'. Here, a message becomes an integrated part of the person's core, due to the affective over-domination of the message. Personal values then integrate the incoming messages, which results in a deeply personal, affective form of externalization. Due to the affective role in layer 3, Valsiner points to music as a more "direct" way to enter layer 3, since music more easily can evoke feelings than words can (ibid.).

Ending notes on Valsiner

The internalization/externalization process has many overlapping elements with information processing. Both processes deal with the receipt of inputs/internalization, processing, and outputs/externalization. Valsiner's model is more figurative and deals with catalysts/regulators, which effect can be described by the function of heuristics (at least this is true for the K regulator). However, in Valsiner's model it seems as if only heuristics and emotions play a role, and nothing is mentioned on the role of systematic processing. In this sense, the interplay between heuristic and systematic processing may help add detail to explaining exactly *how* catalysts/regulators might work.
However, the major difference between internalization/externalization and information processing is the view of the individual as culture-creating. By dividing the explanation of internalization/externalization into three models, Valsiner succeeds in displaying the individual in a cultural context - both as receiver (individual) and creator (a social creature by nature). It is this perspective of the individual and culture, the article aims to include.

Researchers note

The article and the paper is believed to give the most precise depiction of a preventive framework for the power of likeability *and* the underlying theoretical framework on which it builds. However, during the process of creation, some perspectives had to be left out due to the progressive nature of the structure and to keep a consistent storyline. It is these topics we will touch on in this section, which we hope will create transparency for the reader and might lead to new ideas for future research.
Underneath you will find each topic listed with its own headline and sorted in no particular order.

Unconscious information processing

Albanese (2015) investigated how information processing happens unconsciously in a commercial context. His research included two hypothesis and a study to test each (Albanese, P. J., (2015), The Unconscious Processing Information):
H1: Unaided brand-name recall will be higher for the advertisements with the negative hidden image embedded in them than for the same advertisements without the embeds.
H2: Unaided brand-name recall will be higher only when anxiety is primed.

Study 1 included 75 university student from the US, who were divided into groups of maximum six participants. Subjects were told to evaluate a new magazine, and inside these magazine were full-page ads from familiar brands. After evaluating the magazine, subject filled out a questionnaire on the magazine, a 20-item STAI (State-Trait Anxiety Inventory for Adults), and finally a questionnaire on recalling brand names, products, and advertisements in the magazine. The results supported H1.
Study 2 included 73 university students from the US. The procedure of the study was the same as in study 1, but the 20-item STAI was replaced with the 18-item Snyder's Self-Monitory Scale (Snyder and Gangestad, 1986, acc. Albanese, 2015). Results supported H2, which ascribe the embedded effect to anxiety prime.

What does this mean for our paper?
First, the aspect of unconscious processing was not mentioned in the paper, so it adds a new perspective. In the article, we propose that consumers have become more enlightened as a part of *advertising evolution*, however, unconscious processing makes it difficult to categorise the behaviour as enlightenment. Instead, we argue that we have to look towards Gigerenzer's work (2001) on emotions. We believe that unconscious processing still creates emotions, and these emotions affect processing and behaviour. In this way, the adaptive ("enlightened") behaviour lies in heuristics and past experience.
However, we still believe that it is relevant to conduct further research on the area of consumer enlightenment.

Credibility
Credibility is a topic that more or less was left out of the article. This intentional exclusion was made to make the point of the article even more clear. The traits credibility, attractiveness, similarity, and likeability are all very closely related. However, the initial search made by the researchers did not immediately relate credibility to likeability. Nonetheless, we believe that credibility and likeability are interdependent in the same way as attractiveness and likeability, and similarity and likeability. Ultimately, this can be explained with Attribution Theory; one positive trait makes individuals expect other traits to be positive as well.
In this section, we want to look closer to the power of credibility.

In 2019, a 48 year old woman were arrested for causing the death of four people. The woman worked as an assistant doctor at hospital in Fritzlar, Germany. The only problem was, however, that she actually was *not* a doctor. Yet she was able to work at a hospital, and no one ever made sure if she was really a doctor. She simply seemed credible. Even though this is a rather horrifying story that caused the death of 4 persons, there are several examples of people faking to be doctors with great success. How is this possible?
In 1963, Milgram performed a rather famous experiment that might serve as an answer to why this is possible. In the experiment, he showed that we find people in authority credible. Specifically, the experiment showed that a "fake" doctor wearing a coat where able to persuade people into sending 450 of lethal volt directly through other peoples bodies. Of course this was all fake, but the participants did not know that. All they saw, was a man in a coat who was ready to take full responsibility of their acts (Milgram, S. (1963). Behavioral Study of Obedience). The takeaway here is that we find people wearing uniforms rather credible, and this perception of credibility in turn makes us more likely to be persuaded (Chaiken, 1980). This is not to say that we should be suspicious when anyone is wearing a uniform. Rather we should be aware that we tend to perceive people who do wear uniforms as being credible, and that this perception of credibility has the potential to act as a persuader.

Credibility and attractiveness

Credibility is not the only trait that has been filtered to fit into the overall storyline. Over the years, researchers have proposed different models for helping companies brand themselves or sell more products. Among the most popular ones are *the source credibility model* and *the source attractiveness model* (Eren-Erdogmusa, I. et al., Attractive or Credible Celebrities: Who endorses Green Products Better?, 2016). Both of these models have been left out of the article as they deviated too much from the focus on likeability. Therefore, we will now look at them both in relation persuasion in general.

The source credibility model was proposed by Hovland et al (1953, acc. Eren-Erdogmusa, I. et al., 2016), and is focused on celebrity brands (Celebrities such as Justin Bieber, Selena Gomez etc). The model states that the effectiveness of any brand message is dependent on the perceived level of expertise and trustworthiness in the celebrity (Hovland et al., 1953, acc.

Eren-Erdogmusa, I. et al., 2016). That means that the more you perceive Justin Bieber (or any other celebrity) to be trustworthy or to be an expert, the more credible you believe he is. Hovland defines trustworthiness as "... the degree of confidence in the communicator's intent to communication the assertions he/she considers the most valid…*"* (ibid., p. 589). Trustworthiness in this view consist of honesty, integrity and believability. Expertise is the degree to which the receiver is perceiving the celebrity to be a valid source (ibid.).
The effectiveness of the celebrity message in a branding or sales situation is thus depending on the perceived credibility he or she has. The more credible the celebrity is perceived to be, the more successful he or she will be in creating attitude changes (persuasion) in their audiences (Sternthal et al., 1978; McGinnies and Ward, 1980, acc. Eren-Erdogmusa, I. et al., 2016).

The source attractiveness model is about how likeable or physically attractive the person (or brand) is perceived to be by his/her/its audience (Ohanian, 1991, acc. Eren-Erdogmusa, I. et al. 2016). According to McGuire (1985, acc. ibid.), attractiveness has four components; familiarity, similarity, likeability, and attractiveness of the individual (McGuire, 1985, acc. ibid.). Except for familiarity, these components have all been described previously. Familiarity is the degree to which you are a familiar with the brand or person who is sending the message (ibid.).
Eren-Erdogmusa et al. (2016) did a study to understand the impact of both source credibility and source attractiveness. The study showed that credibility and attractiveness have different effects depending on the products that the celebrities are selling. Specifically they found that the attitude towards non-durable products increased when using a *credible* person, and that the attitude towards durable products increased when using an *attractive* celebrity (Eren-Erdogmusa et al., 2016).
This means that you are more likely to be persuaded if the fit between the persuader and the product that he/she is trying to persuade you into buying is just right. The effect is lesser if the wrong celebrity is advertising the "wrong product".

Future research

The purpose of this paper has been to inform the reader of the power of likeability. Several of our day-to-day decisions can be affected by likeability, and we therefore wanted to take the

reader through some of the major likeability litterature. One of our goals has been to discover what major traits is leading to likeability (such as similarity, attractiveness, receiving gifts, etc.), as well as showing how one is able to spot such traits. Furthermore, we took the reader through some of the most dominant literature in the field of information processing. This was done to lay the foundation for how one can understand the mechanisms which activate likeability cues, and why such cues potentially lead to persuasion. The last section took account of several variables that are also influencing information processing, and which can be different from person to person based on evolution, social surroundings and culture. All of these variables were tied to likeability, and ultimately provided the reader with tangible set of questions (framework) that will create protection against likeability.

We acknowledged that the likeability protection framework was not practical, and therefore decided to construct a framework using fewer questions. These questions were believed to be easy to use in practice, as well as creating protection against likeability. We created an acronym known as "SHIRT", in the hope that it would help the reader remember the framework.

The shirt framework:
S - Do we wear the *same* clothes?
H - Is the person *hot* (physically attractive)?
I - Do I have continuous *interaction* with the brand?
R - Did I *receive* a gift or compliment?
T - Does the brand *treat* me like im favoured and high priority?

The "S" helps the reader spot signs of similarity. Recall, that similarity is one of the major traits leading to likeability, and that having the same clothes is potentially enough to create a feeling of similarity. We speculated that this was due to the fact that having the same clothes reflected a sharing of values, which is known to create a powerful feeling of similarity, ultimately leading to likeability. Thus, if the reader acknowledges that he/she is wearing the same clothes as someone else, the probability of perceiving this person as likeable increases.

The “H” helps the reader look for attractiveness. Recall that attractiveness is another major traits of creating likeability. Attractiveness has a physical component, meaning if we perceive someone as being physically attractive, we also tend to like them more due to the attribution theory. Thus, if the reader is able to acknowledge when someone is “hot”, he/she should know that it increases likeability.

The “I” helps the reader look for interaction. Recall that if people have continuous interaction with a brand, it increases the perception of how likeable it is perceived to be. Thus, the “I” helps people acknowledge whether they are feeling motivated to interact with the brand on a regular basis.

The “R” helps the reader look for compliments and/or gifts. Recall that if you receive a compliments and/or a gift from someone or something, you are more likely to perceive them/it as likeable. Thus, the R increases the awareness in regards to how many compliments or gifts have been received from a person or brand.

The “T” helps the reader dive into whether or not he/she is *feeling* favoured by a person or brand (treated favourably). Recall, that if you are feeling favoured by a someone or something (a brand), it increases likeability. Thus, the “T” helps you acknowledge when you are feeling favoured.

Conducting an experiment

Even though our SHIRT framework has a strong theoretical fundament, it still has not been validated through a controlled experiment. In this section, we therefore propose how such an experiment could be designed. We believe that it is ideal to seek inspiration from previous studies which are already known to create persuasion through likeability, in order to test whether or not the SHIRT framework is able to protect people.

Recall that Silvia (2005) showed how similarity leads to persuasion by increasing the perception of likeability. In the study, he manipulated similarity through shared names, birthdays and values. The study showed that the experimenter was able to make the participants agree with him, if they were sharing name, birthday, or values. We therefore

propose to replicate this study, with a few changes. The purpose is to test whether participants who are familiar with the SHIRT framework are able to avoid persuasion.

The experiment

We will be using a total of 112 participants (like the Silvia 2005 study). These participants will be randomly divided into three different groups. The first group will receive training in the SHIRT framework, the second group will be given information on the power of likeability in the form of a short lecture, and the third group will not receive any new information before the experiment.

In the experiment, participants will read one of two different essays. Essay 1 will be manipulated so that the sender shares the same name, birthday, or values with the participants. Essay 2 will not share the same name, birthday, or values. After the participants have read the essays, they will be asked to determine whether they agree with a range of statements from the sender of the essay, in order to see whether or not they will be persuaded into agreeing with these statements. We expect to find that the people who have received education in the SHIRT framework will not be persuaded, as they know how the perception of similarity leads to increased likeability, which increases persuasion.

However, the above mentioned experiment only takes account of similarity as the main persuader. Even though similarity is one of the most consistent trait in the literature when it comes to creating likeability, it still is not enough to test the SHIRT framework thoroughly. We therefore propose a range of experiments, each with the purpose of testing a particular part of the SHIRT framework. This will help us accomplish two things; 1) we will be able to see which part of the SHIRT framework works best in terms of protection (eg. S,H,I,R or T), and 2) we will be able to see if all aspects of the SHIRT framework creates protection in practise.

Testing the H (physical attractiveness)

For this experiment we will still be using 112 participants. These will be randomly divided into three different groups. The first will receive training in the SHIRT framework, while the second will receive a lecture in the power of likeability, and the third one will not receive any information before the experiment. Like the first experiment, participants will read one of

two different essays. However, the first essay will be manipulated so that the participants will see a picture of a physically attractive person who supposedly had been writing the essay. On the second essay, a picture of a less attractive person will be shown. Once the participants have read the essays, they will be asked to either agree or disagree with a range of statements coming from the senders of the essays. We expect to find, that people who have received training in the SHIRT framework will tend to agree less with the statements since they know that physically attractive people are more persuasive.

Testing the I (continuous interaction)

This experiment will be using the same number of participants as before. Likewise, the participants will be randomly divided into three groups. The first group will receive training in the SHIRT framework, while the second group will receive a lecture in the power of likeability. The third group will not receive any training at all. One month before the experiments officially start, the participants will have ongoing conversations with the researcher in order to create continuous interaction. In the same period, they will have *one* interaction with another researcher. Then, the participants will read three essays. One coming from the first researcher, who they have had ongoing interaction with, one coming from the other researcher, and one coming from a researcher they do not know. The participants are then asked to agree with statements coming from all essay senders. We expect to find, that participants who have received training in the SHIRT framework are less likely to be persuaded in general.

Testing the R (receiving gift or compliment)

As with the other experiments, we will be testing 112 participants, who will be randomly divided into three different groups. The first group will receive training in the SHIRT framework, while the second will receive a lecture in the power of likeability, and the third one will not receive any information before the experiment.

Participants will be presented to a communicator who is a public speaker trainee. They are told to rate him based on how strongly his point gets across in his speech. Participants from each group will receive one of two conditions: *receiving a gift or compliment* or *not receiving*

a gift or compliment. The hypothesis is that participants who have been trained in the SHIRT framework will be less persuaded by the gift or compliment.

Testing the T (treated favourably)

The procedure of this experiment will be much like the others mentioned above. 112 participants will be randomly divided into three different groups. The first will receive training in the SHIRT framework, while the second will receive a lecture in the power of likeability, and the third one will not receive any information before the experiment.
They will be told that they are a part of a qualitative review of a new product that is about to hit the market. Participants from each group will receive one of two conditions; *being treated favourably by a communicator* or *being treated neutrally by a communicator*. After being presented to the new product, they receive a questionnaire on a number of questions in regards to the product. In the presentation, the communicator will have tried to make the participants particularly fond of a certain feature. The hypothesis is that participants with the SHIRT framework will be less persuaded than those with the lecture and the control group.

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