

Linguistic profiling in job advertisements

Using linguistic markers to attract the ideal candidate

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Abstract

The last past years, recruitment managers have learned a lot about the way job advertisements can affect the decision of potential job candidates to apply for a position. A lot of the insights came from adapting marketing-like strategies for regular (commercial) advertisements. Now neuromarketing has shown that language affects us on a daily base, language and linguistic profiling might prove an important new tool in the recruiters toolbox. Linguistic profiling is the use of specific word categories in a job advertisement to reflect a 'personality profile' to which a job seeker can relate. As such, the job seeker is more inclined to apply to the position, and the recruiter has a tool to affect the decision of a potential job candidate. Whilst linguistic profiling as a subject in recruitment studies is not yet researched, this thesis studies the potential use of linguistic profiling in contemporary job advertisements. Analysis of 97 online job advertisements shows moderate evidence towards the use of linguistic profiling in the sectors of banking and fast moving consumer goods, however the evidence is yet far from convincing. Using the methodological framework, in combination with the theoretical framework, presented in this paper, further research should focus on establishing strong links between linguistic word categories and personality traits.

Foreword

As a student at the Erasmus School of Economics, I always found myself challenged to make the best of my time at the Erasmus University Rotterdam. Both during my Bachelors (IBEB) and my Masters in Marketing interesting, innovative and exciting courses triggered me to go out of my comfort zone and explore the vast amount of (academic) topics that are related to economy, psychology, philosophy and neuroscience. Now, at the end of my time at Erasmus University, I cannot wait to put the things learned in the past years into practice.

This thesis considers a topic that combines marketing, recruitment and human resources, psychology and neuroscience. Whilst not all the fields of expertise came to me easily, I feel that this dissertation reflects the time I spend at University well. On the one hand to stay close to my interest in marketing, while extending my knowledge on the topic and on the other hand by sidestepping from my initial interest (towards recruitment uses of marketing tools) and finding an extensive, but interesting new field of research that was able to quench my curiosity.

You are about to read my thesis on the topic of linguistic profiling in job advertisements. It has been written with a lot of pleasure, and hopefully you may read it likewise.

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Introduction

Recruitment is a very 'hot and happening' topic for organizations and has been for the last 20 years. The reason for the increasing interest in this topic is that well-managed human resources can be a great advantage in the eternal fight for competitive advantage. Nowadays there is an extensive range of recruitment methods, from traditional (and still commonly used) job advertisements to large scale recruitment fairs and online recruitment via social media such as Magnet.me and LinkedIn. While there are many ways of bringing new talent into the organization, recruitment managers always have to keep in mind that their organization is competing with other companies in the so-called 'War for talent'. If these managers want to hire the most valuable employees, they need to convince the talent that the organisation is the best match out there for them. To ensure the attraction of high talented new employment, recruitment managers need to create job advertisements that are customized to speak directly to the high-potential candidates. The reason for this research is therefore to try and shed more light onto customization possibilities in job advertisements.

The term 'War for talent' was first pitched in 1998 by researchers from McKinsey & Company and has been further used to stress the ongoing fight for qualified employees. In the 'War for talent', named to indicate the importance of attracting high-talent human capital, winning the battle for valuable human resources is considered key to competitive advantage (Chambers, Foulon, Handfield-Jones, Hankin, & Michaels, 1998). The paper from Chambers et al. (1998) stated that new talent would be the most important corporate resource in the coming 20 years, with the underlying reason that human resource management is recognised to directly affect organizational performance and is seen as a source of sustained competitive advantage (Barney, 1986; Barney & Wright, 1998; Becker & Gerhart, 1996; Delaney & Huselid, 1996). Whilst the importance of talented employees is not anymore accredited to be 'the most important asset' in the latest human resource research, it is to this day of utmost concern to any organisation to bring in new talent (Beechler & Woodward, 2009; Pfeffer & Sutton, 2006).

Understanding how recruitment works and using that knowledge to influence the outcome of the recruitment process, helps organizations in creating sustained advantage. In the early stages of the recruitment process, the job seeker has the opportunity to send an application to a potential employee. Organizations can influence the decision of the job seeker to apply – amongst other things – through selecting specific recruitment methods and by carefully composing the layout and message of job advertisements (Boudreau & Rynes, 1985; Highhouse & Hoffman, 2001). The question of interest is how to influence the 'ideal' and most suited candidate in their decision to apply. The focus of this

thesis will therefore be on the early stages of the recruitment process, more specifically on the physical attributes of (online) job advertisements, building an understanding of the possible role that the language that is used in the advertisement plays in the attraction of job applicants. Proper use of linguistic profiling in job advertisements might result in a better Person-Job and Person-Organisation fit, thus benefiting both the employer and the employee. For that reason, the study conducted in this thesis will examine the contemporary use of linguistic profiling in the human resource practices aimed at recruiting marketers and salespeople.

For the purpose of revealing the influence of language and linguistic profiling in contemporary recruitment practices, this research will look at lessons marketing can learn us about adequate and convincing communication. This thesis will make the connection between the communication of recruitment activities (such as job advertisements) and the communication used for meeting marketing goals. Marketing and the recently emerging sub-branch of marketing called neuromarketing have a lot of theoretical framework to offer for recruitment research. Neuromarketing has been developed as a tool for directly measuring the impact of marketing stimuli on the bodily and emotional responses. This way, the problem of inaccurate self-reports¹ can be evaded when conducting marketing research and thus neuromarketing tools can give a better understanding of psychological effects that are evoked when communicating with customers (Ramsøy, 2015). Whilst (neuro)marketing theories are already more and more included in recruitment research, there are a lot of undiscovered uses of especially neuromarketing that could prove a great value to the practice of writing adequate job advertisements. Similarly, research done on recruitment advertising can provide new insights that are also applicable in common marketing practices.

The approach of this thesis will be to start with a review of the upcoming of recruitment research. We will discuss traditional (possibly outdated) approaches to recruitment advertisement research and from there start to make the connection between recruitment research and marketing theories. Furthermore, the more contemporary approaches of recruitment will be discussed and the link between traditional and online recruitment is established. As we have established the context of common recruitment practises, the focus will shift towards enhancing the recruitment message, taking language as a potential marker for job seekers to enforce their decision to apply on a specific position. An extension of the *Organizational Recruitment Process Model* (Breaugh & Starke, 2000) will be suggested as a possible implication for human resource managers of the theoretical research of this

¹ Self-reports are considered subjective measure. Whilst they can be helpful in understanding conscious consumer behaviour, they might misrepresent objective behavioural drivers, as self-reports can be influenced by a variety of situational variables, such as the research instrument itself (Schwarz, 1999).

thesis. Finally, the contemporary use of language markers in online job advertisements will be tested to see whether the suggested linguistic solutions are already used.

Theoretical background

Human resources recruitment has been more and more the topic of (academic) research for the last 40 years (for meta-reviews see Breaugh, 2008; Breaugh & Starke, 2000; Kaplan, Aamodt, & Wilk, 1991; Walker, Feild, Giles, & Bernerth, 2008). Originating from a very basic and minimalistic approach to recruitment (Guion, 1976), research in the late 1980s and early 1990s developed a much needed interest in the efficiency of employee recruitment (Barber, 1998; Rynes, 1989; Rynes, Bretz Jr., & Gerhart, 1991). More specifically, advertisements and its physical attributes, such as in newspapers or magazines, got more and more attention, as traditionally recruitment in those types of media were the preferred method of recruitment for organizations (Fyock, 1988; Greenberg, 1986; Magnus, 1987). Unconsciously, recruitment advertisements were more and more treated as regular advertisements, entering the working field of marketing.

By changing the variables of job advertisements (e.g. size of the ad, colours used, spacing and wording of the message), researchers tried to increase the size of the applicant pool, hence enlarging the chance of a qualified applicant. This is where human resource recruitment finds its first common ground with marketing strategies. Job openings are more and more considered a 'product' that is sold to job applicants, wherein the job market is approached as the corresponding 'product market' and the job seekers as 'potential customers' (Cable & Turban, 2001; Kaplan, Aamodt, & Wilk, 1991; Price, 1996). Now that the job opening is considered a product, research is focussed on communication about the product (Ryan, Gubern, & Rodriguez, 2000). This change of view on recruitment started to shift the focus of research from the organization's point of view towards the applicant's point of view (Barber & Roehling, 1993; Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Jones, Shultz, & Chapman, 2006; Rynes & Miller, 1983). Instead of only simply venting the job opening and listing the qualifications of the 'ideal' candidate (Rawlinson, 1998), the job seeker is now approached as the receiver of information (Highhouse & Hoffman, 2001).

When looking at the job advertisement as a medium for reaching the job seeker, the lay-out, the message and the tone of the job advertisement are variables that can be altered for marketing purposes. In assessing and improving the marketable variables of job advertisements, there are a lot of physical elements that can influence the readership of the ad. In other words, the question became which physical elements are important, if the goal is to maximize the number of job seekers that read the advertisement. Early research has already looked into specifics such as word count of the advertisement (Holbrook & Lehmann, 1980; Soley, 1986), size of the advertisement (Holbrook & Lehmann, 1980; Valiente, 1973), message specificity (Roberson, Collins, & Oreg, 2005), message content (Barber & Roehling, 1993; Cable & Judge, 1994) and other variables that trigger job seekers to

read and respond to traditional job advertisements (Kaplan, Aamodt, & Wilk, 1991; Rynes & Cable, 2003; Walker, Feild, Giles, & Bernerth, 2008).

Nowadays, research has shifted partially to online recruitment, which appears to be a more (cost) efficient way for organizations to communicate job openings and collect responses (Braddy, Foster Thompson, Wuensch, & Grossnickle, 2003; Braddy, Meade, & Kroustalis, 2006; Cober, Brown, Blumental, Doverspike, & Levy, 2000; Lievens & Harris, 2003). Just like traditional recruitment advertisements, online recruitment advertisements are able to maximize the application pool by enhancing marketable variable such as website design (Braddy, Meade, & Kroustalis, 2006; Dineen, Ling, Ash, & DelVecchio, 2007) and message content (Dineen, Ash, & Noe, 2002; Dineen, Ling, Ash, & DelVecchio, 2007). However, above mentioned papers suggest that further research is much required on the topic of online recruitment, since the possible benefits of customizable online recruitment needs to be further investigated .

The common numerator between perceptions of traditional and online recruitment ads is that human resource managers think from the perspective of the job seeker and adjust the marketable variables accordingly. This allows for 'targeted recruitment' (Breugh, 2008; Ryan, Gubern, & Rodriguez, 2000), a term that finds its origin in the similar term 'targeted marketing'. Targeted recruitment stresses the individual differences of job seekers (e.g. competences, nationality, gender, educational background) using advertisement variables to enhance the job seeker's feeling of belonging on the advertised position (Rynes & Cable, 2003; Schneider, 2001). The perception of belonging on the advertised position is the so called 'Personality-Job fit' (P-J fit) and is an important predictor on the intentions of the job seeker to respond to the advertisement (O'Reilly, 1977). In a similar manner, the perceived fit with the organization (Person-Organization fit; P-O fit) is a predictor for a response by the job seeker on a job advertisement (Arthur, Bell, Villado, & Doverspike, 2006; Judge & Cable, 1997). The feeling of belonging in a certain position (P-J), as well as the feeling of belonging in a certain organization (P-O), is the result of perceived shared values for the job or with an organization. In this way, targeted recruitment can influence the number of qualified job applicants by aligning the marketable variables of recruitment advertisements to exert the values and personality traits of the desired employee. From a marketing perspective, the benefits of a P-J or P-O fit are no surprise. Cable and Turban (2003) have shown that the image of an organization can be seen as the identity of a brand. Much like the Person-Job/Organization fit is a predictor of applicant response, self-congruence with brands often is a good predictor of consumer behaviour (Hosany & Martin, 2012; Onkvisit & Shaw, 1987; Sirgy, et al., 1997).

Knowing that marketable variables of a job advertisement have an effect on the type of job applicant that is attracted to the organization, the question is how you can tweak the advertisement in such a

way that the ideal applicant is indeed triggered to respond to the advertisement. There appears to be a need of congruence between the customer - the job seeker - and the product - the job (Ryan, Gubern, & Rodriguez, 2000). According to the P-J/P-O fit theory, the values and personality traits of the desired employee need to be communicated in such a manner that the desired employees recognize their own values and personality traits in the 'ideal candidate-description' (O'Reilly, 1977; Rynes & Cable, 2003). This suggests that the recruitment message is an important facet in the decision of the job seeker to respond to the advertisement.

The importance and possible effects of the recruitment message have been the focus of several research papers (Highhouse & Brooks, 2006; Roberson, Collins, & Oreg, 2005), such as research in respect to the concept of the Realistic Job Preview² (Meglino, Ravlin, & DeNisi, 2000; Popovich & Wanous, 1982; Wanous, 1973). However, only little research has been done to the actual wording and language used in recruitment advertisements, which several papers did find to have a possible effect on the recruitment pool. Linguistic markers, signalling a certain employee-profile to the job seeker, might have considerable influence on the employee-profile that is perceived by the job seeker. For example, the paper of Askehave and Zethsen (2014) recognizes linguistic framing in advertisements, as their paper studies the effect of gender profiling for Danish top managerial positions and found that job advertisements are often gender biased due to the language used. Furthermore, papers of Born & Taris (2010) and Gaucher et al. (2011) suggest that gendered wording (masculine- vs. feminine-themed words) in recruitment advertisements negatively affected the feeling of belongingness for a job 'issued' for the opposite gender.

Above mentioned examples of gender profiling in job advertisements suggests that job seekers indeed are able to read a specific personality profile using linguistic cues only. When linguistic profiling is suspected to be applicable for gender profiling, the question is raised whether linguistic profiling is also possible for other physical or psychological characteristics, such as values and personality traits. While there has not yet been much research on this topic, several studies indicate that this might be the case. The earliest research on the influence of personality on language use comes from 1942, when Sanford stated that "There are many indications that language is a vehicle of personality [...] for when the person speaks, he tells us [...] about himself" (1942, p. 840). A more contemporary study conducted by Pennebaker and King (1999) shows that the personality of the writer can be deduced from his writing in a reliable and consistent way.

² Realistic Job Preview is a way of describing the job opening in a way that "contain[s] detailed descriptions of relevant job aspects including negative as well as positive features,[...] in contrast with traditional recruiting techniques that emphasize only positive characteristics of a job" (Meglino, Ravlin, & DeNisi, 2000, p. 407).

As the possibility of linguistic profiling in job advertisements is strongly suggested by earlier research, we also need to look to the possible effect of such profiling on the job seeker. As the P-J/P-O fit theory states, when a job seeker feels that the specific values and personality traits required for a job/organization are congruent with his own values and traits, he is more likely to feel a sense of belonging on a specific position. The most convincing evidence backing up this proposition comes from the research of Johnson *et al.* who suggested in a study on managerial recruitment that "the similarity-attraction relation resulted in more favorable job ratings when the applicant and ideal job candidate had the same personality" (2008, p. 644). An implication of the latter notion and the theory of linguistic profiling would be that a human resource manager can improve the likelihood of establishing a connection with the job seeker by altering the language in the job advertisement. This proposition is supported by the research of Fitzsimons and Kay, who found evidence that "perceptions of interpersonal closeness and relationship quality are affected by subtle variations in language" (2004, p. 555). In other words, the perceived fit between entities can be influenced by variations in language.

Breaugh and Starke (2000) have suggested a model called the *Organizational Recruitment Process model*. In this model, Breaugh and Starke identify the five key stages of the recruitment process that human resource managers need to recognize and the topics that are relevant for each stage. Altogether, the model is designed to cover the complete recruitment process from setting recruitment objectives (e.g. number/quality of applicants, diversity of hires, job performance) to the evaluation of the recruitment outcomes. See Figure 1 on the next page for the complete model of Breaugh and Starke.

When the assumption is correct that specific wording and language used can influence the job seeker in their decision to respond to a job advertisement, human resource managers should incorporate linguistic profiling in their recruitment strategy. Hence, I would like to suggest to include the topic 'What linguistic profile to communicate?' to the 'Strategy Development' stage that the model by Breaugh and Starke proposes. The newly suggested topic seems similar to the topic 'What message to communicate?' that they have already included in their model, however the difference is that 'what message' refers to the content of the message and 'what linguistic profile' refers to the shape of the message by using specific wording in the message.

This distinction might prove to be important, as the presented theoretical framework in this thesis attempts to demonstrate. The use of deliberate linguistic profiling in human resource management

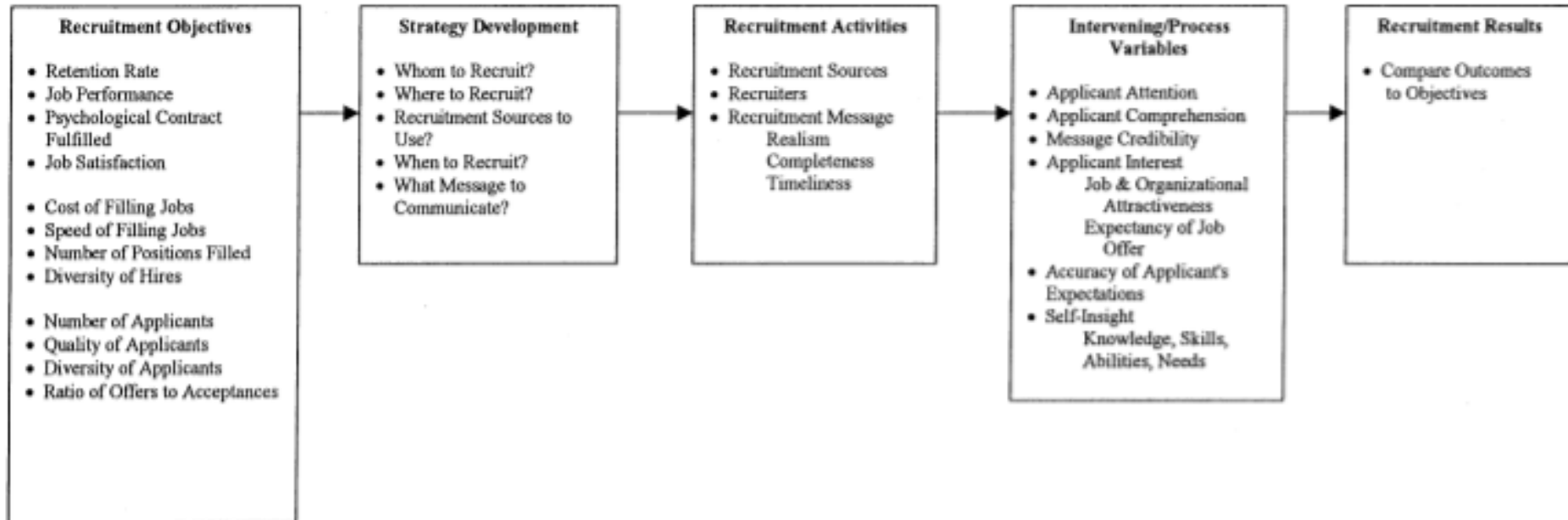


Figure 1; A model of the Organizational Recruitment Process (Breaugh & Starke, 2000)

and recruitment practices have not yet been the subject of academic research so far, and this thesis is the first that suggests using linguistic profiling as a recruitment tool. The main purpose of this thesis therefore is to open the discussion on the use of linguistic profiling in recruitment practices.

Defining the research question and hypotheses

It is clear that the recruitment research up until this point has contributed a lot on today's recruitment practices. However it remains unclear if human resource managers are already exploring the use of linguistic profiling in their recruitment advertisements. Recruiters might already use language as a marketable variable in their attempts to influence the job seeker to respond to their job advertisements and it would give a lot of insight in common recruitment strategies to see whether recruiters already practice some kind of linguistic profiling. Focus of this study will be on the segment of online job advertisements, in accordance with the latest developments of recruitment advertising.

Since previous research on the topic of wording and linguistic profiling yet have to make the link to the possible implications of profiling on recruitment and job advertisements, this thesis will start to investigate the current use of linguistic profiling in recruitment practices. The reason for this starting point is that, whilst the theory is lacking on this topic, recruiters may have already started to practice the use linguistic markers in their recruitment message. If the results of this study suggest that linguistic profiling is already used by recruiters, it would not necessarily mean that the linguistic profile is the result of conscious actions, as it could possibly be the result of the intuitive writing skills of experienced human resource managers. To predefine the scope of the research, this thesis will focus on the differences in linguistic profiles of marketers and salespeople. The research question of this thesis therefore will be

"Do differences in the wording of job advertisements aimed at marketers versus salespeople indicate the use of linguistic profiling in contemporary recruitment practices?"

However, before we can even begin to answer the research question and to formulate the subsequent hypothesis, we need to define the scope of the research and understand the differences in personality traits between marketers and salespeople and which linguistic categories would correlate with these personality traits.

Due to the limited size of this thesis and the vastness of the unexplored topics in the field of (neuro)linguistics, it is important to define the scope of this thesis. For this reason and to accommodate above mentioned purposes, this thesis sets up a study on the differences in linguistic approach of two job positions. In reflection with the thesis supervisor prof. dr. W. J. M. I. Verbeke, the choice has been made to study the different linguistic approaches of recruiters towards the professions of marketers and salespeople. The choice for salespeople as the first profession of comparison is based on his previous research on salespeople and their personality characteristics (Verbeke, 1994; Verbeke, Dietz,

& Verwaal, 2011). Furthermore, being a future marketer myself, the choice for marketers as the second profession seems very much in line with my own field of expertise.

A major benefit of these professions is that both job positions are often found within most companies and therefore many online job advertisements are available. The choice for online job advertisements enables the collection of multiple recent job advertisements, making the study a realistic representation of the contemporary recruitment practices. However, in order to frame the scope of research, I have decided to limit the amount of sectors from which the job advertisements are collected. Here, the choice has been made to focus on both the banking sector and the fast moving consumer goods (FMCG) sector. These two sectors both employ a vast amount of marketing specialist and salespeople, making them ideal sectors of research. The banking sector houses multiple of the largest companies of the world (Forbes Media LLC, 2016), enabling those companies to invest majorly in human resource management, enlarging the chance of using linguistic tactics as part of their recruitment strategy.

Another distinction that the study of this thesis makes is between small and medium sized enterprises (SMEs) and large organizations. The underlying reason for this distinction is that the expected use of linguistic profiling - if used at all - is more likely to be adopted by large companies than for SMEs. This expectation is based on the assumption that SMEs have less financial means to support their recruitment practices than larger companies have. Furthermore, SMEs are falling behind on larger companies in regard to the adoption of newer, systematic recruitment procedures (Carroll, Marchington, Earnshaw, & Taylor, 1999).

Lastly, a distinction between the location of the advertised job position is made. The main question here is if either Britain-English or American-English lends itself more for linguistic profiling, or simply if UK-based companies are more inclined to use linguistic profiling than their USA-based counterparts are.

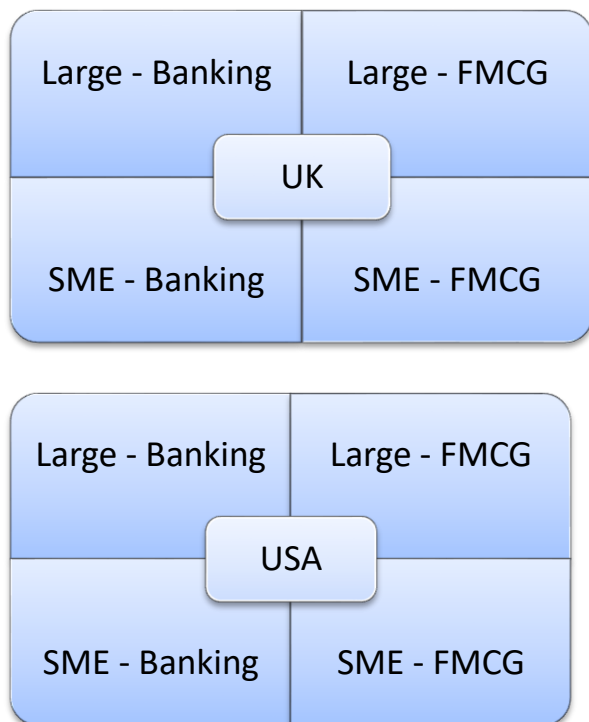


Figure 2; The different categories (size, sector, location)

To make a good assessment of the differences in linguistic approach toward marketers and salespersons, it is important to define a clear connection between the personality traits of these professions and the linguistic word categories that are used to research linguistic profiling. In the *Methodology* paragraph of this paper, a more comprehensive explanation of the word categories will be given. For now, it suffices to understand that each of the words used in a job advertisement can be put into a word category and each word category will be matched with a specific personality trait.

Unfortunately, theory on the correlation between word categories and personality traits is just starting to gain attention, and is therefore not yet sufficiently available for use in this study. This makes it impossible to make strong linguistic profiles on academic grounds, and forces the author of this thesis to compose his own expected correlating links. This means that the basis on which the personality traits are linked to specific linguistic word categories in this thesis is very subjective and should rather be viewed as the methodological proposal of a new research method. Note therefore the limitations that are mentioned in the *Limitations* paragraph of this thesis.

As such, the linguistic word categories that are used to differentiate between the two job positions is not based (academic) research, but merely on three web articles (Davids, 2010; Gabe, 2007; Saxby, 2013). Together, they offer some framework which this research uses to select differentiation criteria by which the linguistic profiles are tested. According to the articles, the main difference between the marketer and the salesperson is the manner by which they work. Where the marketer often bases his

strategies on (extensive) data presented, the salesperson has a more personal, direct and verbal approach. One could say that the marketer is focussed on the abstract idea of the product, in a more long term approach, where the salesperson is tasked to sell the product on the spot in a very concrete setting, using his verbal skill to persuade the customer of the value that the product has to offer. Secondly, the salesperson is believed to have a stronger sense of result, as often times part of his livelihood is build on the commission he receives after a sale. Therefore he would be more likely to also have a stronger drive for results (Davids, 2010; Gabe, 2007; Saxby, 2013). Based on these differences, four personality aspects have been offered to address the personality of either the marketer or the salesperson. Each aspect is assigned a combination of word categories that are derived from the Linguistic Inquiry and Word Count 2015 (LIWC2015) application. A more extensive explanation on how this application works is given in the next paragraph.

The first personality aspect that is composed for the purpose of this thesis, relates to the verbal aspect of salespeople and their ability to persuade the customer. Persuasion is used by salespeople to communicate their message and to convince their customers to trust them (and consequently believe in the product that is offered) (Martin, 2010). This differential point, which should favour the salesperson, will be named *verbal and persuasive ability*. Verbal and persuasive ability is chosen to be build from 13 linguistic word categories.

The second difference between the marketer and the salesperson is the personal relation between the salesperson and the customer that is required to become more effective in closing the deal (Ingram, LaForge, Avila, Schwepker, & Williams, 2007). This personal connection helps the salesperson to seem trustworthy, likable or even admirable, making it more likely to sell the product. Therefore, 12 linguistic word categories that are used to define the personality aspect *personal context*. This personality trait is also expected to favour the salesperson.

The last two personality aspects that are expected to be differential between the marketer and the salesperson are the scope of time and the nature of their work. The salesperson, in this perspective, is assumed to have a rather short-term focus and a more concrete assignment. He needs to accommodate the customer and close the sale, rather sooner than later. Of course, there is also a longer term component to his work (aftercare, repeated purchases etc.), but as most salespeople are working on commission, the salesperson is expected to have a more short term view on his work and has a greater drive to succeed than the marketer. The assumed long term focus of the marketer includes among others brand building, altering the concept of the product to ensure long lasting sales possibilities and providing the company with a sustainable marketing strategy. In contrast to the salesperson, the marketer in this perception has a profoundly more abstract aspect to his work.

Furthermore, the work of the marketer is assumed to be more data driven than that of the salesperson. Therefore, the last two personality traits on which the research question will be tested are *short term, concrete and outcome driven* (expected to favour the salesperson), which is composed out of 11 linguistic word categories, versus *long term, abstract and data driven* (expected to favour the marketer), composed out of a combination of 5 word categories.

These four categories are used to test the existence of linguistic profiles in job advertisements. In the *Methodology* paragraph, the complete list of the linguistic word categories that make up the personality traits can be found.

This study will test several hypothesis based on the background, previous research and theoretical framework that have been presented in the previous paragraphs of this thesis. The main question to be answered is whether there can be found evidence in the data suggesting common practices of linguistic profiling towards marketers and salespersons. The evidence for suggested use of linguistic profiling is expected to be found in the four defined categories, taking into account the different scopes of research (banking vs. FMCG, large vs. small companies, UK-based vs. USA-based). The first hypothesis, therefore will be

- (1) Linguistic profiling is suggested when comparing *all* job advertisements for marketers versus salespeople

which will be tested using the following sub-hypotheses

- (1a) Comparing *all* job advertisements for marketers versus salespeople, the personality aspect *Verbal and persuasive ability* will favour salespeople
- (1b) Comparing *all* job advertisements for marketers versus salespeople, the personality aspect *Personal context* will favour salespeople
- (1c) Comparing *all* job advertisements for marketers versus salespeople, the personality aspect *Short term, concrete and outcome driven* will favour salespeople
- (1d) Comparing *all* job advertisements for marketers versus salespeople, the personality aspect *Long term, abstract and data driven* will favour marketers

Hypothesis (1) in this case is the result of the latter four hypotheses. Either none, one, two, three or all sub-hypothesis are accepted (or 'not rejected'), giving a total of five possible outcomes. When either

all or three sub-hypothesis are accepted, hypothesis (1) is also accepted (or 'not rejected'). When only two or less sub-hypothesis are assumed to be correct, hypothesis (1) is rejected.

Sub-hypotheses (1a) till (1d) are individually accepted when the following condition is fulfilled: there is a majority of significant linguistic word categories favouring the job position named in the sub-hypothesis (for the first three sub-hypothesis that would be salespeople, for the last (1d) that would be marketers). The significance of the 'favourability' of the linguistic word categories is tested using a simple T-test, and the statistical hypothesis tested for each category is

$$(i) \quad H_0: \bar{x}_{m,i} = \bar{x}_{s,i}$$

$$H_a: \bar{x}_{m,i} \neq \bar{x}_{s,i}$$

Where \bar{x} is the mean percentage/word count of job advertisements directed at marketers (m) or salespeople (s) for a specific linguistic category (i).

To get the full scope of this study, this hypothesis is repeated a total of six times with the different size, sector and location categories. Comparable to hypothesis (1), the next hypotheses (2-7) also have four sub-hypotheses similar to (1a) till (1d). For readability purposes these sub-hypotheses will not be restated for the coming hypothesis.

The second to seventh hypotheses will be

- (2) Linguistic profiling is suggested when comparing job advertisements of *SME companies* for marketers versus salespeople
- (3) Linguistic profiling is suggested when comparing job advertisements of *large companies* for marketers versus salespeople
- (4) Linguistic profiling is suggested when comparing job advertisements of *banking companies* for marketers versus salespeople
- (5) Linguistic profiling is suggested when comparing job advertisements of *FMCG companies* for marketers versus salespeople
- (6) Linguistic profiling is suggested when comparing job advertisements for *UK-based job positions* for marketers versus salespeople
- (7) Linguistic profiling is suggested when comparing job advertisements for *USA-based job positions* for marketers versus salespeople

Since the personality aspects have a weak and non-academic base, this thesis does not aim at finding evidence that *proves* the use of linguistic profiles, but rather aims at finding evidence that *suggests* the use of linguistic profiling in common recruitment practices.

Methodology

The research question and the subsequent (sub-)hypothesis are answered by analysing 97 different job advertisements. These job advertisements were collected from the website of 97 companies. These job advertisements were then used as input for the application LIWC2015. The output of this application is used to analyse the differences in linguistic approach of advertisements aimed at marketers and salespeople. This is done by using an independent T-test, which will find the significance of the differences between word categories used for marketer and salespeople job advertisements, and whether each difference favours the marketer or the salesperson. In accordance with the sub-hypothesis that are stated in the previous paragraph, the results of the T-tests on the linguistic categories will give a score to each personality aspect, after which the sub-hypothesis and consequently the hypothesis is accepted or rejected.

The analysis of the job advertisements is done using an application called Linguistic Inquiry and Word Count, or LIWC for short. LIWC is a linguistic analysis tool that is developed with the purpose of having an easy and efficient way of analysing large text files and consequently to assist linguistic research. The first version of LIWC came out during the early 1990s to assist a language and disclosure research of Pennebaker and Francis (1993), and has since then been improved in both the use of its dictionary and in the software running the application. The specific version of LIWC used for this thesis is LIWC2015, which uses the most up-to-date dictionary available. This version of the application uses an internal dictionary to analyse the text file, assigning the words in the text to one of the 93 possible categories, subcategorized in the themes of Word Count, Summary Language Variables, Linguistic Dimensions, Other Grammar and Psychological Processes. An overview of all categories can be found in Appendix B. The categories are defined in such a manner that it covers a multitude of linguistic analytics, which each can be used for different research purposes. The output of the analysis of one text file summarizes the linguistic analytics of that text file in one line of data (e.g. in an excel file), listing either the absolute (number) or relative (percentage) count of the words for each category (Pennebaker, Boyd, Jordan, & Blackburn, 2015).

To test whether the job advertisements for marketers indeed differ from job advertisements for salespeople in specific linguistic categories, one of the most common methods is used, namely the t-test. The t-test is a relatively simple statistical tool that compares two means and tests whether they are significantly different. There are multiple kinds of t-tests available, each relevant to a specific sample size and assumed variation. In our case, the independent samples t-test is used, which compares the means of two unrelated groups, meaning that the comparison is done between two groups with measured data from one point in time, rather than comparing one group with data from

two periods in time. Depending on whether equal or unequal variance is assumed, respectively the so-called *Students t-test for independent samples* or the *Welch's t-test* is to be used. Equality of variance is measured using *Levene's test for homogeneity of variances*.

The test statistic for independent samples of unequal size and with equal variance is written down as follows

$$t_{m,s,i} = \frac{\bar{x}_{m,i} - \bar{x}_{s,i}}{S_p * \sqrt{\frac{1}{n_m} + \frac{1}{n_s}}}$$

where $\bar{x}_{m,i}$ and $\bar{x}_{s,i}$ denote the average use of a word from category i for marketers (m) and salespeople (s). n_m and n_s respectively denote the sample size of the marketer job advertisements and the salesperson job advertisements. S_p is the estimator for pooled standard deviation, which is calculated as

$$S_p = \sqrt{\frac{(n_m - 1) * S_{x_m}^2 + (n_s - 1) * S_{x_s}^2}{n_m + n_s - 2}}$$

where $S_{x_m}^2$ and $S_{x_s}^2$ are the unbiased estimators of the variances.

The test statistic for independent samples of unequal size and with unequal variance is written down as follows

$$t_{m,s,i} = \frac{\bar{x}_{m,i} - \bar{x}_{s,i}}{\sqrt{\frac{S_m^2}{n_m} + \frac{S_s^2}{n_s}}}$$

where $\bar{x}_{m,i}$ and $\bar{x}_{s,i}$ denote the average use of a word from category i for marketers (m) and salespeople (s). n_m and n_s respectively denote the sample size of the marketer job advertisements and the salesperson job advertisements. Note that this test is not based on a pooled variance estimate.

The categories that were tested for the purpose of this study were tested using the independent sample test that is available in the application SPSS. This application is a widely used tool in the field of social sciences and can be used with minimal knowledge of statistical analysis. Together with LIWC2015, these two applications form the base of the linguistic analysis performed in this study.

The first part of this paragraph shows how the job advertisements are analysed, how the words are categorized and how the differences between marketer and salesperson advertisements are tested. However, the remaining question is how we specifically are going to test the hypothesis. In the chapter

Defining the research question and hypotheses a brief introduction has already been made, but a more in depth explanation will be given. First of all, there are four personality aspects that are distinguished - three personality aspects that are expected to align with the personality of the salesperson and one aspect expected to align with the personality of the marketer. This study combines multiple linguistic word categories, which are the variables that are used by LIWC2015 to categorize the words of the job advertisements, to describe these personality aspects.

Each combination of linguistic word categories that describe a personality traits is expected to favour either the salesperson (for the personality traits *Verbal and persuasive ability; Personal context; Short term, concrete and outcome driven*) or the marketer (personality trait *Long term, abstract and data driven*). If there are more linguistic word categories that favour the expected job function, the corresponding hypothesis is accepted. In other words, the linguistic word categories that favour the salesperson are expected to be more present in the job advertisements that are aimed at a salesperson and less present in the job advertisements aimed at a marketer, and vice versa.

Table 1 shows a list of the personality aspects and their corresponding linguistic word categories. The word categories (e.g. *Clout, Swear words, Tone, Authentic, Articles*) are chosen to reflect the different personality aspects, however as stated before, theory on which these combinations should be made is lacking, therefore making the combinations very subjective.

| Verbal and persuasive skills (S) | Personal context (S) | Short term, concrete and outcome driven (S) | Long term, abstract and data driven (M) |
|----------------------------------|----------------------------|---|---|
| 1 Clout | 1 Tone | 1 Articles | 1 Word count |
| | 2 Authentic | 2 Interrogatives | 2 Analytic |
| <i>Informal language</i> | | 3 Numbers | 3 Quantifiers |
| 2 Swear words | 3 1st pers singular | | |
| 3 Netspeak | 4 3rd pers singular | <i>Perceptual processes</i> | 4 Insight |
| 4 Assent | 5 1st pers plural* | 4 See | 5 Causation |
| 5 Nonfluencies | 6 3rd pers plural* | 5 Hear | |
| | | 6 Feel | |
| 6 Pastfocus | <i>Affective processes</i> | | |
| 7 Presentfocus | 7 Positive emotion | <i>Drives</i> | |
| 8 Futurefocus | 8 Negative emotion | 7 Affiliatoin | |
| | 8a Anxiety | 8 Achievement | |
| 9 Conjunctions | 8b Anger | 9 Power | |
| | 8c Sadness | 10 Reward | |
| 10 Discrepancy | | 11 Risk | |
| 11 Tentative | <i>Social processes</i> | | |
| 12 Certainty | 9 Family | | |
| 13 Differentiation | 10 Friends | | |

Table 1; Personality aspects and their subsequent linguistic word categories

(S) for traits favouring salespeople, (M) for traits favouring marketers,

* for linguistic word categories that are expected to have a negative relationship to their personality trait

As can be seen, the four personality aspects are composed with a minimum of 5 and a maximum of 13 word categories. In total, there are 41 linguistic word categories used to test the hypotheses. Furthermore, three of the four personality aspects are composed to describe salespeople and only one to describe marketers. It is not a coincidence that the three aspects of salespeople also have the most linguistic word categories, from the little research that was available on the personality traits of salespeople or marketers, most were about the traits of salespeople.

As the chosen word categories are expected to be very subjective, an extensive discussion on the compilation of the personality aspects will not lead to a significant better compilation of the personality aspects. However, the combinations of personality aspects and linguistic word categories are not chosen at random. Therefore, in appendix A(a) till appendix A(d) a in depth description of the used word categories can be found, describing the fundamentals that are underlying to the combinations. Also, due to the subjectivity of the link between the linguistic word categories and the personality aspects, the difference between the approach of marketers and salespeople is not expected to be very significant. In order to still make a differentiation between the language used in the job advertisements, a significance level of 15% has been chosen. Differences in linguistic word categories with a significance of 5% are distinguished.

Data

For this research, 97 online job advertisements were gathered during the period between May and November 2016. The advertisements are gathered from the recruitment websites of the companies self, as this is the best indicator that the human resource managers of the companies have written the job advertisement themselves. In accordance to the scope of the research, several categories were implemented in the search for adequate job advertisements. A total of 50 advertisements vented positions as marketer, and 47 advertisements offered a position as salesperson. 50 job advertisements were from the banking sector, 47 advertisements were from the FMCG sector. Concerning size, 50 advertisements from large companies and 47 from SMEs were added to the study. The location of the job was divided in three categories, of which only two categories were used in the study. 32 advertisements vented job positions in the UK, 52 advertisements were venting positions in the USA and 13 advertisements were for positions outside the UK or USA.

| Category | Count |
|---------------|-------|
| Marketer | 50 |
| Salesperson | 47 |
| Banking | 50 |
| FMCG | 47 |
| Large | 50 |
| SME | 47 |
| UK-based | 32 |
| USA-based | 52 |
| Otherly-based | 13 |

Table 2; Number of job advertisements per category

The data used for any research often has a bias in the way the data is gathered. Therefore, it is important to consider the parameters of this potential bias and to question the possible implications on the results. In this case, the specific categories that were chosen for the scope of the research already implemented some bias on the result. As mentioned above, the categories are size (large companies versus SMEs), sector (banking versus FMCG companies) and location (UK versus USA based companies).

The large companies that are used in this study have been selected according to Forbes' list "The World's Biggest Public Companies 2016". This list is composed using revenues, profits, assets and market value as the four metrics that measure company size (Forbes Media LLC, 2016). The result of using this list is that the 'large companies' are actually the largest companies in the world. For the SMEs, the selection criteria that is used when gathering the job advertisements are the amount of employees they have. A maximum number of employees have been chosen per sector, for the banking sector a maximum of 3400 and for the FMCG sector a maximum of 1200 has been set. These maxima are chosen for practical reasons, as the maxima are low enough to ensure a difference between the large companies (who have at least 10.000+ employees) and the SMEs, whilst being high enough to find an adequate number of job advertisements. Both the way the list of large companies is composed, and the maximum number of employees a SME can have, are expected to bias the results.

During the collection of data, I found that many SMEs did not have an extensive recruitment service on their website, but often vented their available positions on specialised websites (e.g. Monsterboard; Indeed). The reason for this might be that online recruitment is a relatively new recruitment channel and SMEs are less likely to adopt such a new channel (Carroll, Marchington, Earnshaw, & Taylor, 1999). This fact made the process of collecting SME online job advertisements less random, as I specifically had to search for SMEs with recruitment sections on their website. It is unclear how this bias affects the results of the research, however I suspect that the impact is limited, since the research question already excludes SMEs that do not write their own recruitment advertisements.

The specific sector of the companies, either the banking or the FMCG sector, is part of the scope of the research and is therefore assumed to not pose additional bias on the results. Companies in the banking sector can be both major (global) banks and regional banks. FMCG companies are involved in industries such as beverages, food processing, tobacco and other fast moving consumer goods.

The location of the job advertisement, or in other words the location of the job that is offered, may have specific restrictions on the job advertisement. In particular the category 'other internationally based companies' (otherly-based companies) was majorly restricted by the assumed language of this research, namely (British or American) English. The implied assumption for those advertisements is that the job advertisements are mainly focussed on foreign applicants. While collecting the data, I found that 'otherly-based companies' that use English advertisements are only found in the 'large sized companies'-category, as not even a single non-UK/USA-based SME had an internationally focussed job advertisement on their website. Conclusively, the otherly-based companies have been excluded from the research in the location category, as there were too few advertisements to make a significant comparison between marketers and salespeople.

The quality of the gathered data is assumed to be sufficient for the purpose of this study. All advertisements are collected from the recruitment websites of the companies and therefore are assumed to reflect the expertise of the human resource department or the corporate recruiter for that company. Furthermore, as all advertisements are collected within the last year, the data is recent enough to speak of 'contemporary recruitment practices'.

Results

The results of the t-test are used to test the hypotheses and conclusively answer the main research question. Tables 4 till 10 show the results of the independent t-tests per personality aspect for the categories *all job advertisements*, *SMEs*, *large companies*, *banking companies*, *FMCG companies*, *UK-based companies* and *USA-based companies*. Each category is divided in the four personality aspect-

categories and will have a summarization of which personality aspect is favouring which job function. As mentioned in the previous paragraphs, it is in line with the hypothesis that personality categories, (also called personality traits or personality aspects) 1 to 3 favour the salesperson and category 4 favours the marketer. The results of the t-test are colour-coded to show which *significant* difference of mean favours which job function. The chosen level of significance is 15% in order to find the expected small differences between marketers and salespeople, where 5% significance gets a different colour-code than 15% significance.

| Colour | Favouring |
|--------|---------------------------------|
| | Marketer at 5% significance |
| | Marketer at 15% significance |
| | Salesperson at 5% significance |
| | Salesperson at 15% significance |

Table 3; Colour-coding of the results

Table 4 shows the results for the comparison of marketers and salespeople between *all job advertisements*. The hypothesis concerning this comparison (hypothesis 1) stated that "*linguistic profiling is suggested when comparing all job advertisements for marketers versus salespeople*". Looking at the Table, it can be seen that from the 41 analysed linguistic word categories there are 15 categories that show a significant difference between job advertisements aimed at marketers versus salespeople. Marketers are favoured by 8 of those differences and salespeople by 7 differences. The first personality category, *verbal and persuasive ability*, has 4 significant differences (2 differences at 15% significance, 2 differences at 5% significance), all of them favouring the salesperson. This is completely in line with the expectations of the sub-hypothesis (1a) and the hypothesis is therefore accepted. The second personality category, *personal context*, also has 4 significant results (again 2 differences at 15% and 2 differences at 5% significance), 3 of them favouring the marketer and 1 favouring the salesperson. This is contrary to the expectations of sub-hypothesis (1b) and the hypothesis is therefore rejected. The third category, *Short term, concrete and outcome driven*, has a total of 5 significant results (1 at 15% significance, 4 at 5% significance). The category favours the marketer with 3 linguistic word categories over 2 categories for the salesperson. Like the second category, this means that the sub-hypothesis (1c) is rejected. The fourth and final category, *Long term, abstract and data driven*, has 2 significant results, both favouring the marketer. Therefore sub-hypothesis (1d) is accepted and this concludes the analysis of the sub-hypothesis.

As sub-hypothesis (1a) and (1d) are accepted, and sub-hypothesis (1b) and (1c) are rejected, the baseline of at least three accepted sub-hypotheses is not reached. Therefore, the study has to reject the hypothesis (1); linguistic profiling is not suggested when comparing all job advertisements for marketers versus salespeople.

| Results of independent t-tests per personality aspect - All job advertisements | | | | | | | |
|--|---------------|------------------|---------|---|---------------|------------------|---------|
| Category 1: Verbal and persuasive ability | | | | Category 2: Personal context | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Clout | 77,928 | 5,869 | 0,430 | Tone | 88,549 | 80,844 | 0,023 |
| | | | | Authentic | 21,378 | 17,349 | 0,100 |
| <i>Informal language</i> | | | | | | | |
| Swear words | 0,004 | 0,011 | 0,369 | 1st pers singular | 0,010 | 0,015 | 0,628 |
| Netspeak | 0,115 | 0,230 | 0,120 | 3rd pers singular | 0,024 | 0,007 | 0,246 |
| Assent | 0,014 | 0,014 | 0,990 | 1st pers plural* | 1,384 | 1,138 | 0,351 |
| Nonfluencies | 0,109 | 0,100 | 0,781 | 3rd pers plural* | 0,196 | 0,234 | 0,545 |
| Pastfocus | 0,439 | 0,704 | 0,007 | <i>Affective processes</i> | | | |
| Presentfocus | 4,961 | 5,334 | 0,304 | Positive emotion | 4,658 | 3,930 | 0,034 |
| Futurefocus | 1,297 | 1,328 | 0,864 | <i>Negative emotion</i> | | | |
| | | | | Anxiety | 0,071 | 0,143 | 0,074 |
| Conjunctions | 7,914 | 7,641 | 0,521 | Anger | 0,060 | 0,082 | 0,498 |
| | | | | Sadness | 0,015 | 0,013 | 0,888 |
| Discrepancy | 0,898 | 1,190 | 0,052 | <i>Social processes</i> | | | |
| Tentative | 1,042 | 1,400 | 0,018 | Family | 0,076 | 0,038 | 0,393 |
| Certainty | 1,424 | 1,227 | 0,194 | Friends | 0,348 | 0,357 | 0,904 |
| Differentiation | 1,326 | 1,566 | 0,170 | | | | |
| Category 3: Short term, concrete and outcome driven | | | | Category 4: Long term, abstract and data driven | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Articles | 5,280 | 4,633 | 0,092 | Word count | 515,66 | 441,30 | 0,083 |
| Interrogatives | 0,475 | 0,438 | 0,673 | Analytic | 93,664 | 92,531 | 0,353 |
| Numbers | 1,106 | 1,746 | 0,006 | Quantifiers | 1,481 | 1,483 | 0,984 |
| <i>Perceptual processes</i> | | | | Insight | 3,559 | 2,775 | 0,009 |
| See | 0,418 | 0,315 | 0,207 | Causation | 3,457 | 3,115 | 0,365 |
| Hear | 0,142 | 0,150 | 0,902 | | | | |
| Feel | 0,118 | 0,118 | 0,988 | | | | |
| <i>Drives</i> | | | | Summary of results | | | |
| Affiliation | 4,387 | 3,247 | 0,006 | | Marketer | Salesperson | Favour |
| Achievement | 7,221 | 5,870 | 0,002 | Category 1 | 0 | 4 | S |
| Power | 4,754 | 5,068 | 0,397 | Category 2 | 3 | 1 | M |
| Reward | 1,886 | 1,843 | 0,838 | Category 3 | 3 | 2 | M |
| Risk | 0,236 | 0,386 | 0,038 | Category 4 | 2 | 0 | M |

Table 4; Results for the category all job advertisements

| Results of independent t-tests per personality aspect - SME job advertisements | | | | | | | |
|--|---------------|------------------|---------|---|---------------|------------------|---------|
| Category 1: Verbal and persuasive ability | | | | Category 2: Personal context | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Clout | 74,667 | 75,009 | 0,922 | Tone | 86,024 | 79,903 | 0,243 |
| <i>Informal language</i> | | | | Authentic | 19,141 | 15,184 | 0,184 |
| Swear words | 0,000 | 0,000 | n.a. | 1st pers singular | 0,013 | 0,000 | 0,328 |
| Netspeak | 0,158 | 0,269 | 0,420 | 3rd pers singular | 0,026 | 0,000 | 0,171 |
| Assent | 0,021 | 0,012 | 0,656 | 1st pers plural* | 1,026 | 1,148 | 0,747 |
| Nonfluencies | 0,077 | 0,082 | 0,902 | 3rd pers plural* | 0,213 | 0,188 | 0,782 |
| Pastfocus | 0,437 | 0,729 | 0,035 | <i>Affective processes</i> | | | |
| Presentfocus | 4,709 | 5,145 | 0,405 | Positive emotion | 4,449 | 3,811 | 0,237 |
| Futurefocus | 1,243 | 1,071 | 0,435 | <i>Negative emotion</i> | | | |
| Conjunctions | 8,354 | 7,901 | 0,545 | Anxiety | 0,068 | 0,095 | 0,549 |
| Discrepancy | 0,973 | 1,264 | 0,212 | Anger | 0,048 | 0,088 | 0,303 |
| Tentative | 1,102 | 1,066 | 0,853 | Sadness | 0,015 | 0,000 | 0,163 |
| Certainty | 1,600 | 1,497 | 0,673 | <i>Social processes</i> | | | |
| Differentiation | 1,378 | 1,260 | 0,639 | Family | 0,114 | 0,028 | 0,315 |
| | | | | Friends | 0,330 | 0,420 | 0,472 |
| Category 3: Short term, concrete and outcome driven | | | | Category 4: Long term, abstract and data driven | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Articles | 5,547 | 4,536 | 0,110 | Word count | 491,21 | 386,52 | 0,073 |
| Interrogatives | 0,437 | 0,415 | 0,869 | Analytic | 93,850 | 92,051 | 0,398 |
| Numbers | 0,940 | 1,870 | 0,008 | Quantifiers | 1,252 | 1,354 | 0,576 |
| <i>Perceptual processes</i> | | | | Insight | 3,630 | 2,254 | 0,001 |
| See | 0,503 | 0,252 | 0,061 | Causation | 3,655 | 3,502 | 0,829 |
| Hear | 0,093 | 0,089 | 0,916 | | | | |
| Feel | 0,071 | 0,071 | 0,989 | | | | |
| <i>Drives</i> | | | | Summary of results | | | |
| Affiliation | 3,940 | 3,055 | 0,136 | | Marketer | Salesperson | Favour |
| Achievement | 7,001 | 6,327 | 0,347 | Category 1 | 0 | 1 | S |
| Power | 4,840 | 4,907 | 0,903 | Category 2 | 0 | 0 | - |
| Reward | 1,818 | 1,960 | 0,679 | Category 3 | 3 | 2 | M |
| Risk | 0,214 | 0,378 | 0,121 | Category 4 | 2 | 0 | M |

Table 5; Results for the category of SME's job advertisements

Hypothesis (2) states that "linguistic profiling is suggested when comparing job advertisements of SME companies for marketers versus salespeople". Table 5 shows the results of the linguistic comparison between marketer and salesperson job advertisements from SMEs. As expected, this category has less differences in their linguistic approach between marketers and salespeople. Only 8 significant differences are found, none of them within the second personality category of personal context, therefore we have to reject sub-hypothesis (2b). 5 of the differences favour marketers and 3 differences favour salespeople. The first category finds only one significance difference (5% significance), which favours the salesperson. This is in line with sub-hypothesis (2a), thus the hypothesis is accepted. The third category finds 5 differences (4 of them on a 15% significance level

and 1 on a 5% significance level), however in contrast to sub-hypothesis (2c) 3 of those differences favour the marketer and only 2 of them favour the salesperson, rejecting this hypothesis as well. The fourth category displays 2 significant differences (1 on 15% significance and 1 on 5% significance), both favouring the marketer, resulting in the acceptance of sub-hypothesis (2d).

The study finds sub-hypothesis (2a) and (2d) accepted and sub-hypothesis (2b) and (2c) rejected. Therefore, the baseline of at least three accepted sub-hypothesis is not reached and hypothesis (2) is rejected. Linguistic profiling is not suggested when comparing job advertisements of SME companies for marketers versus salespeople.

Table 6 shows the results for the third hypothesis: *"linguistic profiling is suggested when comparing job advertisements of large companies for marketers versus salespeople"*. As expected, for the category large companies, there are found more significant differences between the job advertisements aimed at marketers versus job advertisements aimed at salespeople. In total, 13 significant differences have been found, of which 6 favour the marketer and 7 favour the salesperson. In this case, in the first personality aspect finds 6 significant differences (3 differences at 15% significance and 3 difference at 5% significance). 5 of those differences favour the salesperson and 1 difference favours the marketer, meaning sub-hypothesis (3a) is accepted. Personality category 2 has a total of 4 differences (3 at 15% significance, 1 at 5% significance), of which 3 differences are favouring the marketer and 1 favouring the salesperson. However, one of the linguistic word categories (*1st person plural*) for which a significant results is found is expected to have a negative relation to the category. Therefore, the conclusion is that there is a 'draw' between the preference of the linguistic word categories. The result is that sub-hypothesis (3b) is neither rejected nor accepted. The third personality category shows 2 linguistic word categories with a significance of 5%, both favouring the marketer. Hence, sub-hypothesis (3c) is also rejected. The fourth and last personality category only finds one difference at 15% significance. This result is favouring the marketer in accordance with sub-hypothesis (3d). This hypothesis is therefore accepted.

Sub-hypothesis (3b) is rejected, as is sub-hypothesis (3c). The other two hypotheses (3a) and (3d) are accepted, however this is not sufficient to accept hypothesis (3). Similar to the previous hypotheses (1) and (2), hypothesis (3) therefore will be rejected. The use of linguistic profiling is not suggested when comparing job advertisements of large companies for marketers versus salespeople.

| Results of independent t-tests per personality aspect - Large companies job advertisements | | | | | | | |
|--|---------------|------------------|---------|---|---------------|------------------|---------|
| Category 1: Verbal and persuasive ability | | | | Category 2: Personal context | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Clout | 80,938 | 76,693 | 0,269 | Tone | 90,880 | 81,747 | 0,041 |
| | | | | Authentic | 23,443 | 19,425 | 0,293 |
| <i>Informal language</i> | | | | 1st pers singular | 0,007 | 0,030 | 0,235 |
| Swear words | 0,007 | 0,022 | 0,358 | 3rd pers singular | 0,021 | 0,015 | 0,754 |
| Netspeak | 0,077 | 0,192 | 0,047 | 1st pers plural* | 1,715 | 1,129 | 0,112 |
| Assent | 0,008 | 0,016 | 0,575 | 3rd pers plural* | 0,181 | 0,277 | 0,283 |
| Nonfluencies | 0,138 | 0,118 | 0,669 | | | | |
| Pastfocus | 0,442 | 0,680 | 0,084 | <i>Affective processes</i> | | | |
| Presentfocus | 5,194 | 5,515 | 0,528 | Positive emotion | 4,852 | 4,045 | 0,066 |
| Futurefocus | 1,348 | 1,574 | 0,407 | <i>Negative emotion</i> | | | |
| Conjunctions | 7,507 | 7,392 | | Anxiety | 0,074 | 0,190 | 0,082 |
| Discrepancy | 0,829 | 1,118 | 0,137 | Anger | 0,071 | 0,075 | 0,928 |
| Tentative | 0,987 | 1,720 | 0,001 | Sadness | 0,015 | 0,026 | 0,651 |
| Certainty | 1,260 | 0,969 | 0,077 | <i>Social processes</i> | | | |
| Differentiation | 1,279 | 1,859 | 0,015 | Family | 0,040 | 0,048 | 0,788 |
| | | | | Friends | 0,365 | 0,297 | 0,410 |
| Category 3: Short term, concrete and outcome driven | | | | Category 4: Long term, abstract and data driven | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Articles | 5,033 | 4,727 | 0,507 | Word count | 538,23 | 493,790 | 0,472 |
| Interrogatives | 0,511 | 0,460 | 0,673 | Analytic | 93,492 | 92,991 | 0,704 |
| Numbers | 1,260 | 1,627 | 0,242 | Quantifiers | 1,692 | 1,608 | 0,676 |
| <i>Perceptual processes</i> | | | | Insight | 3,494 | 3,275 | 0,614 |
| See | 0,340 | 0,375 | 0,726 | Causation | 3,275 | 2,745 | 0,084 |
| Hear | 0,187 | 0,208 | 0,856 | | | | |
| Feel | 0,161 | 0,163 | 0,968 | | | | |
| <i>Drives</i> | | | | Summary of results | | | |
| Affiliation | 4,799 | 3,430 | 0,018 | | Marketer | Salesperson | Favour |
| Achievement | 7,424 | 5,432 | 0,000 | Category 1 | 1 | 5 | S |
| Power | 4,675 | 5,223 | 0,288 | Category 2 | 2 | 2 | - |
| Reward | 1,949 | 1,730 | 0,395 | Category 3 | 2 | 0 | M |
| Risk | 0,257 | 0,393 | 0,163 | Category 4 | 1 | 0 | M |

Table 6; Results for the category of large companies' job advertisements

The results concerning hypothesis (4) - "linguistic profiling is suggested when comparing job advertisements of banking companies for marketers versus salespeople" - are shown in Table 7. With 16 significant linguistic differences that are found between the job advertisements for marketers versus salespeople, this is the individual category with the largest amount of differences in their recruitment approach. The marketer is favoured by 9 of these differences and the salesperson by 7 of them. Looking at the personality categories, it can be seen that category one has found a total of 6 differences (3 at a 15% significance level and 3 at 5% significance), 2 of them favouring the marketer and the other 4 favouring the salesperson. This implicates that sub-hypothesis (4a) is accepted. The

second category has 3 differences at 15% significance, 2 of them favouring the marketer and the last difference favouring the salesperson, leading to the rejection of hypothesis (4b). Of the 5 differences found in category three (1 significant at 15%, 4 at 5%), 4 are found in favour of the marketer and 1 in favour of the salesperson. Therefore, also sub-hypothesis (4c) is to be rejected. For the last personality aspect only 1 difference is found (15% significance), favouring the marketer. This means that sub-hypothesis (4d) is accepted.

| Results of independent t-tests per personality aspect -Banking sector job advertisements | | | | | | | |
|--|---------------|------------------|---------|---|---------------|------------------|---------|
| Category 1: Verbal and persuasive ability | | | | Category 2: Personal context | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Clout | 79,400 | 73,823 | 0,135 | Tone | 90,722 | 83,277 | 0,073 |
| | | | | Authentic | 18,962 | 18,336 | 0,829 |
| <i>Informal language</i> | | | | | | | |
| Swear words | 0,000 | 0,012 | 0,328 | 1st pers singular | 0,000 | 0,007 | 0,328 |
| Netspeak | 0,065 | 0,231 | 0,095 | 3rd pers singular | 0,030 | 0,015 | 0,530 |
| Assent | 0,007 | 0,000 | 0,361 | 1st pers plural* | 1,561 | 1,157 | 0,346 |
| Nonfluencies | 0,118 | 0,133 | 0,764 | 3rd pers plural* | 0,268 | 0,224 | 0,632 |
| | | | | <i>Affective processes</i> | | | |
| Pastfocus | 0,428 | 0,770 | 0,031 | Positive emotion | 4,938 | 4,133 | 0,069 |
| Presentfocus | 5,435 | 5,229 | 0,678 | <i>Negative emotion</i> | | | |
| Futurefocus | 1,096 | 1,283 | 0,404 | Anxiety | 0,109 | 0,242 | 0,063 |
| | | | | Anger | 0,067 | 0,075 | 0,877 |
| Conjunctions | 8,065 | 8,223 | 0,751 | Sadness | 0,013 | 0,027 | 0,534 |
| Discrepancy | 0,865 | 1,296 | 0,044 | <i>Social processes</i> | | | |
| Tentative | 1,083 | 1,611 | 0,028 | Family | 0,113 | 0,011 | 0,174 |
| Certainty | 1,522 | 1,186 | 0,103 | Friends | 0,403 | 0,389 | 0,877 |
| Differentiation | 1,407 | 1,835 | 0,116 | | | | |
| Category 3: Short term, concrete and outcome driven | | | | Category 4: Long term, abstract and data driven | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Articles | 5,232 | 4,377 | 0,074 | Word count | 506,00 | 447,13 | 0,330 |
| Interrogatives | 0,544 | 0,547 | 0,989 | Analytic | 93,352 | 92,570 | 0,593 |
| Numbers | 1,001 | 1,863 | 0,018 | Quantifiers | 1,489 | 1,583 | 0,625 |
| <i>Perceptual processes</i> | | | | Insight | 3,373 | 3,355 | 0,967 |
| See | 0,373 | 0,130 | 0,001 | Causation | 3,506 | 2,924 | 0,146 |
| Hear | 0,114 | 0,018 | 0,278 | | | | |
| Feel | 0,168 | 0,121 | 0,383 | | | | |
| <i>Drives</i> | | | | Summary of results | | | |
| Affiliation | 4,937 | 3,501 | 0,018 | | Marketer | Salesperson | Favour |
| Achievement | 6,942 | 5,354 | 0,001 | Category 1 | 2 | 5 | S |
| Power | 5,193 | 5,602 | 0,436 | Category 2 | 2 | 1 | M |
| Reward | 2,014 | 1,960 | 0,847 | Category 3 | 4 | 1 | M |
| Risk | 0,313 | 0,477 | 0,178 | Category 4 | 1 | 0 | M |

Table 7; Results for the category of banking companies' job advertisements

As we see that only sub-hypotheses (4a) and (4d) are accepted and sub-hypotheses (4b) and (4c) are rejected, we can conclude that hypothesis (4) must be rejected and that linguistic profiling is not

suggested when comparing job advertisements of banking companies for marketers versus salespeople.

| Results of independent t-tests per personality aspect -FMCG sector job advertisements | | | | | | | |
|---|---------------|------------------|---------|---|---------------|------------------|---------|
| Category 1: Verbal and persuasive ability | | | | Category 2: Personal context | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Clout | 76,200 | 77,830 | 0,660 | Tone | 85,998 | 78,513 | 0,163 |
| | | | | Authentic | 24,214 | 16,404 | 0,057 |
| <i>Informal language</i> | | | | | | | |
| Swear words | 0,008 | 0,011 | 0,824 | 1st pers singular | 0,021 | 0,023 | 0,928 |
| Netspeak | 0,175 | 0,228 | 0,643 | 3rd pers singular | 0,017 | 0,000 | 0,328 |
| Assent | 0,022 | 0,028 | 0,822 | 1st pers plural* | 1,177 | 1,120 | 0,857 |
| Nonfluencies | 0,098 | 0,070 | 0,396 | 3rd pers plural* | 0,111 | 0,243 | 0,117 |
| Pastfocus | 0,453 | 0,640 | 0,122 | <i>Affective processes</i> | | | |
| Presentfocus | 4,405 | 5,434 | 0,052 | Positive emotion | 4,330 | 3,736 | 0,262 |
| Futurefocus | 1,534 | 1,370 | 0,565 | <i>Negative emotion</i> | | | |
| Conjunctions | 7,738 | 7,084 | 0,348 | Anxiety | 0,026 | 0,048 | 0,426 |
| Discrepancy | 0,937 | 1,088 | 0,490 | Anger | 0,051 | 0,086 | 0,357 |
| Tentative | 0,994 | 1,198 | 0,252 | Sadness | 0,017 | 0,000 | 0,162 |
| Certainty | 1,308 | 1,268 | 0,855 | <i>Social processes</i> | | | |
| Differentiation | 1,231 | 1,308 | 0,713 | Family | 0,032 | 0,064 | 0,339 |
| | | | | Friends | 0,284 | 0,327 | 0,712 |
| Category 3: Short term, concrete and outcome driven | | | | Category 4: Long term, abstract and data driven | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Articles | 5,336 | 4,879 | 0,460 | Word count | 527,00 | 435,71 | 0,157 |
| Interrogatives | 0,394 | 0,333 | 0,538 | Analytic | 94,030 | 92,495 | 0,448 |
| Numbers | 1,230 | 1,633 | 0,200 | Quantifiers | 1,471 | 1,388 | 0,697 |
| <i>Perceptual processes</i> | | | | Insight | 3,778 | 2,219 | 0,000 |
| See | 0,471 | 0,491 | 0,889 | Causation | 3,401 | 3,298 | 0,878 |
| Hear | 0,175 | 0,118 | 0,604 | | | | |
| Feel | 0,058 | 0,115 | 0,108 | | | | |
| <i>Drives</i> | | | | Summary of results | | | |
| Affiliation | 3,740 | 3,003 | 0,183 | | Marketer | Salesperson | Favour |
| Achievement | 7,548 | 6,364 | 0,108 | Category 1 | 0 | 2 | S |
| Power | 4,240 | 4,556 | 0,504 | Category 2 | 2 | 0 | M |
| Reward | 1,736 | 1,730 | 0,986 | Category 3 | 1 | 2 | S |
| Risk | 0,145 | 0,298 | 0,039 | Category 4 | 1 | 0 | M |

Table 8; Results for the category of FMCG companies' job advertisements

Table 8 shows the results of the t-test conducted for the category of FMCG companies. The corresponding hypothesis (5) states that "linguistic profiling is suggested when comparing job advertisements of FMCG companies for marketers versus salespeople". This category has a total of 8 significant differences in their approach towards marketers versus salespeople, 4 of them favouring the marketer and 4 of them favouring the salesperson. At a significance level of 15%, the first category has 2 linguistic word categories favouring the salesperson. This leads us to accept sub-hypothesis (5a).

The second personality category finds 2 significant results (both at 15%), of which there is 1 linguistic word category that favours marketers and 1 that favours salespersons. However, as has been seen before, the word category *3rd person plural* was expected to have a negative relation with the salesperson, thus this analysis finds that a total of 2 points are accredited to favouring the marketer, hence rejecting sub-hypothesis (5b). The third personality category has 3 significant different linguistic word categories (2 at 15% significance and 1 at 5% significance), of which 2 favour the salesperson and 1 favours the marketer. This results in the acceptance of sub-hypothesis (5c). The fourth and last category to be assessed has 1 significant result (5% significance) favouring the marketer, therefore we also accept sub-hypothesis (5d).

The conclusion on hypothesis (5) is that the first hypothesis of this thesis has to be accepted. As there are three sub-hypotheses that are accepted (5a, 5c and 5d), the baseline in order to accept the general hypothesis (5) has been reached. For this hypothesis, we can say that linguistic profiling is suggested when comparing job advertisements of FMCG companies for marketers versus salespeople.

Table 9 shows the results of the independent t-test that was performed on the data-set of job advertisements of which the location is based in the UK. These results are used to give an answer to hypothesis (6), stating that *"linguistic profiling is suggested when comparing job advertisements of UK-based job advertisements for marketers versus salespeople"*. In this category, a total of 6 significant differences have been found on the language used in marketers and salespeople job advertisements. 4 of the significant results describe differences in favour of the salesperson, and 2 of them describe differences in favour of the marketer. In the first personality aspect, 2 differences have been found at a 15% significance level, both favouring the salesperson. This means sub-hypothesis (6a) is accepted. Similarly, in the second personality category there have been found 2 linguistic word categories that are significant at a level of 15%, 1 of them favouring the salesperson and 1 favouring the marketer. The sub-hypothesis (6b) is therefore rejected. The third category has only 1 significant difference (15% significance), favouring the salesperson. Therefore, sub-hypothesis (6c) is accepted. Lastly, the study finds 1 difference at a 5% significance level in the fourth category, which favours the marketer. This leaves us to accept sub-hypothesis (6d) as well.

Whilst sub-hypothesis (6b) is rejected, sub-hypotheses (6a), (6c) and (6d) are accepted. This means that we accept the general hypothesis (6) in its statement that linguistic profiling is suggested when comparing job advertisements of UK-based companies for marketers versus salespeople.

| Results of independent t-tests per personality aspect - UK-based job advertisements | | | | | | | |
|---|---------------|------------------|---------|---|---------------|------------------|---------|
| Category 1: Verbal and persuasive ability | | | | Category 2: Personal context | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Clout | 92,920 | 80,820 | 0,645 | Tone | 88,534 | 83,329 | 0,453 |
| <i>Informal language</i> | | | | Authentic | 22,784 | 17,114 | 0,174 |
| Swear words | 0,000 | 0,000 | n.a. | 1st pers singular | 0,033 | 0,033 | 0,993 |
| Netspeak | 0,063 | 0,318 | 0,126 | 3rd pers singular | 0,000 | 0,000 | n.a. |
| Assent | 0,010 | 0,000 | 0,334 | 1st pers plural* | 2,101 | 1,544 | 0,263 |
| Nonfluencies | 0,095 | 0,074 | 0,634 | 3rd pers plural* | 0,177 | 0,217 | 0,647 |
| Pastfocus | 0,397 | 0,658 | 0,122 | <i>Affective processes</i> | | | |
| Presentfocus | 5,836 | 6,045 | 0,768 | Positive emotion | 4,924 | 4,225 | 0,302 |
| Futurefocus | 1,642 | 1,509 | 0,734 | <i>Negative emotion</i> | | | |
| Conjunctions | 7,510 | 7,515 | 0,996 | Anxiety | 0,118 | 0,161 | 0,530 |
| Discrepancy | 1,039 | 1,310 | 0,310 | Anger | 0,077 | 0,047 | 0,483 |
| Tentative | 0,997 | 0,924 | 0,739 | Sadness | 0,037 | 0,000 | 0,085 |
| Certainty | 1,438 | 1,322 | 0,658 | <i>Social processes</i> | | | |
| Differentiation | 1,284 | 1,127 | 0,482 | Family | 0,129 | 0,039 | 0,467 |
| | | | | Friends | 0,287 | 0,532 | 0,121 |
| Category 3: Short term, concrete and outcome driven | | | | Category 4: Long term, abstract and data driven | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Articles | 6,467 | 5,562 | 0,177 | Word count | 519,27 | 500,24 | 0,812 |
| Interrogatives | 0,753 | 0,602 | 0,334 | Analytic | 92,599 | 90,898 | 0,572 |
| Numbers | 0,869 | 1,354 | 0,152 | Quantifiers | 1,444 | 1,275 | 0,515 |
| <i>Perceptual processes</i> | | | | Insight | 3,233 | 2,218 | 0,023 |
| See | 0,473 | 0,461 | 0,936 | Causation | 3,411 | 3,427 | 0,987 |
| Hear | 0,069 | 0,141 | 0,269 | | | | |
| Feel | 0,087 | 0,119 | 0,563 | | | | |
| <i>Drives</i> | | | | Summary of results | | | |
| Affiliation | 4,487 | 3,774 | 0,298 | | Marketer | Salesperson | Favour |
| Achievement | 7,386 | 6,105 | 0,186 | Category 1 | 0 | 2 | S |
| Power | 4,596 | 4,218 | 0,507 | Category 2 | 1 | 1 | - |
| Reward | 2,033 | 1,869 | 0,667 | Category 3 | 0 | 1 | S |
| Risk | 0,222 | 0,417 | 0,137 | Category 4 | 1 | 0 | M |

Table 9; Results for the category of UK-based job advertisements

Finally, Table 10 shows the results that are used to test hypothesis (7). This hypothesis states that "linguistic profiling is suggested when comparing job advertisements of USA-based job advertisements for marketers versus salespeople". 13 significant differences were found in this category, of which 5 favoured the salesperson and 8 favoured the marketer. The first category has a total of 3 differences (2 at 15% significance and 1 at 5% significance), all favouring the salesperson. Therefore, sub-hypothesis (7a) is accepted. The second personality aspect has 3 significant results (2 at 15%, 1 at 5%), which all favour the marketer. The result is that sub-hypothesis (7b) is rejected. The third personality aspect is found to have 5 significant differences (2 at 15% significance, 3 at 5% significance). 3 of those differences favour the marketer and 2 favour the salesperson. Therefore, sub-hypothesis (7c) is also

rejected. The last category contains 2 significant differences (1 at 15% significance and 1 at 5% significance), which both favour the marketer. Therefore, we accept sub-hypothesis (7d).

Sub-hypothesis (7a) and (7d) are accepted, but as sub-hypothesis (7b) and (7c) are rejected, hypothesis (7) is rejected. In accordance to our hypothesis, linguistic profiling is therefore not suggested when comparing job advertisements of UK-based companies for marketers versus salespeople.

| Results of independent t-tests per personality aspect - USA-based job advertisements | | | | | | | |
|--|---------------|------------------|---------|---|---------------|------------------|---------|
| Category 1: Verbal and persuasive ability | | | | Category 2: Personal context | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Clout | 72,926 | 72,505 | 0,895 | Tone | 87,674 | 79,312 | 0,035 |
| | | | | Authentic | 21,172 | 15,871 | 0,107 |
| <i>Informal language</i> | | | | | | | |
| Swear words | 0,285 | 0,304 | 0,333 | 1st pers singular | 0,000 | 0,000 | n.a. |
| Netspeak | 0,006 | 0,023 | 0,428 | 3rd pers singular | 0,032 | 0,015 | 0,489 |
| Assent | 0,142 | 0,208 | 0,672 | 1st pers plural* | 0,838 | 0,829 | 0,975 |
| Nonfluencies | 0,019 | 0,029 | 0,442 | 3rd pers plural* | 0,179 | 0,229 | 0,541 |
| Pastfocus | 0,495 | 0,700 | 0,099 | <i>Affective processes</i> | | | |
| Presentfocus | 4,309 | 4,812 | 0,152 | Positive emotion | 4,400 | 3,574 | 0,052 |
| Futurefocus | 1,840 | 1,125 | 0,773 | <i>Negative emotion</i> | | | |
| Conjunctions | 8,109 | 7,457 | 0,249 | Anxiety | 0,038 | 0,070 | 0,430 |
| | | | | Anger | 0,046 | 0,089 | 0,263 |
| | | | | Sadness | 0,007 | 0,006 | 0,920 |
| Discrepancy | 0,840 | 1,214 | 0,084 | <i>Social processes</i> | | | |
| Tentative | 1,144 | 1,629 | 0,023 | Family | 0,046 | 0,049 | 0,926 |
| Certainty | 1,471 | 1,304 | 0,444 | Friends | 0,366 | 0,292 | 0,409 |
| Differentiation | 1,428 | 1,753 | 0,221 | | | | |
| Category 3: Short term, concrete and outcome driven | | | | Category 4: Long term, abstract and data driven | | | |
| | Mean marketer | Mean salesperson | P-value | | Mean marketer | Mean salesperson | P-value |
| Articles | 4,669 | 4,207 | 0,321 | Word count | 499,90 | 416,22 | 0,134 |
| Interrogatives | 0,290 | 0,263 | 0,754 | Analytic | 94,414 | 94,027 | 0,735 |
| Numbers | 1,358 | 2,090 | 0,044 | Quantifiers | 1,530 | 1,714 | 0,332 |
| <i>Perceptual processes</i> | | | | Insight | 3,735 | 2,851 | 0,035 |
| See | 0,426 | 0,253 | 0,138 | Causation | 3,470 | 3,020 | 0,217 |
| Hear | 0,199 | 0,073 | 0,203 | | | | |
| Feel | 0,085 | 0,099 | 0,705 | | | | |
| <i>Drives</i> | | | | Summary of results | | | |
| Affiliation | 4,010 | 2,925 | 0,041 | | Marketer | Salesperson | Favour |
| Achievement | 7,102 | 5,986 | 0,032 | Category 1 | 0 | 3 | S |
| Power | 4,983 | 5,415 | 0,396 | Category 2 | 3 | 0 | M |
| Reward | 1,738 | 1,785 | 0,862 | Category 3 | 3 | 2 | M |
| Risk | 0,222 | 0,369 | 0,107 | Category 4 | 2 | 0 | M |

Table 10; Results for the category of USA-based job advertisements

Discussion

The results describe the various differences in use of linguistic word categories in job advertisements aimed at marketers versus salespeople. An overview of the results is given in Table 11.

| | Verbal and persuasive ability | | | Personal context | | | Short term, concrete and outcome driven | | | Long term, abstract and data driven | | |
|------------------------------------|-------------------------------|-------|--------|------------------|-------|--------|---|-------|--------|-------------------------------------|-------|--------|
| | LWC M | LWC S | Favour | LWC M | LWC S | Favour | LWC M | LWC S | Favour | LWC M | LWC S | Favour |
| All job advertisements | 0 | 4 | S | 3 | 1 | M | 3 | 2 | M | 2 | 0 | M |
| SME job advertisements | 0 | 1 | S | 0 | 0 | - | 3 | 2 | M | 2 | 0 | M |
| Large company job advertisements | 1 | 5 | S | 2 | 2 | M | 2 | 0 | M | 1 | 0 | M |
| Banking company job advertisements | 2 | 5 | S | 2 | 1 | M | 4 | 1 | M | 1 | 0 | M |
| FMCG company job advertisements | 0 | 2 | S | 2 | 0 | M | 1 | 2 | S | 1 | 0 | M |
| UK-based job advertisements | 0 | 2 | S | 1 | 1 | - | 0 | 1 | S | 1 | 0 | M |
| USA-based job advertisements | 0 | 3 | S | 3 | 0 | M | 3 | 2 | M | 2 | 0 | M |

Table 11; An overview of the results

Table 11 reads as follows: 'LWC' indicates the amount of significant Linguistic Word Categories in favour of either Marketers (LWC M) or Salespeople (LWC S). 'Favour' indicates whether there were more linguistic words categories favouring the Marketer (M) or the Salesperson (S). The colour of the cell in which the 'favour' is mentioned depicts, if the corresponding sub-hypothesis was accepted (green) or rejected (yellow). In this Table, the favour of personality aspect 'Verbal and persuasive ability' corresponds to sub-hypothesis (a), 'Personal context' to sub-hypothesis (b), 'Short term, concrete and outcome driven' to hypothesis (c) and 'Long term, abstract and data driven' to sub-hypothesis (d). The first column (containing the variables '*All job advertisements*', '*SME job advertisements*' etc.) are the categories that correspond with the hypothesis (1) till (7). When such a category has 3 or more 'accepted sub-hypotheses' in its row, it means that the hypothesis of that category is accepted.

As can be seen in Table 11, only hypothesis (5) and (6) are accepted. According to the stated hypothesis, the acceptance of these hypotheses suggests that both in the job advertisements for FMCG companies and UK-based job positions linguistic profiling is used by recruitment managers. For the other categories, including the overall difference between marketer and salesperson job advertisements, the hypotheses had to be rejected (these are hypotheses (1) till (4) and (7)). The results suggest that in certain sectors or job locations, linguistic profiling may already be a common recruitment practice. However, the results are far from conclusive and are imprecise at best, due to the subjective fabrication of the personality categories.

On average, each category that was tested had 11,29 significant differences in linguistic word categories out of the total of 41 word categories that were tested (either favouring marketers or

salespeople). This number of differences suggests that recruiters indeed do make a difference in the use of language when addressing a marketer or a salesperson. Taking into account the subjectivity and the lack of an academic base on which the linguistic word categories are connected to the personality traits, it is highly likely that the results of this study can be improved, if the personality traits are linked to the linguistic word categories on a more solid base. In other words, the possibility is very real that the word categories, used in this study to describe the personality traits of the marketer and salesperson, are not very accurate. More so, due to the lack of academic research, it is also possible that the personality traits, used to describe the character of the marketer and salesperson, are not accurate.

However, despite the fact that the variables of this research are far from convincing, it can be said that with the acceptance of two out of the seven hypotheses, there is some evidence suggesting that linguistic profiling is already used nowadays by human resource managers. Whether the suggested use of linguistic profiling is based on theory, intuition or even coincidence cannot be said. Since academic research is lacking on this subject and coincidental use is very unlikely, linguistic profiling based on intuition would be the most feasible explanation. If so, this practice would be a strong spokesman for further research on linguistic profiling.

Discussion beyond hypotheses

Looking at the (sub-)hypotheses, the answer to the research question is not evident. The data shows significant differences between word categories, and even personality traits composed of those categories, in job advertisements aimed at marketers and salespeople, however, the favourability of those difference are not correctly predicted based on the appointed personality categories. This re-raises the earlier question, whether the personality categories/traits are composed in a reliable manner or not. In this case, one can argue that the data has more to offer than the current hypothesis reflect.

For instance, when looking at Table 11 in the previous paragraph, the second personality category *Personal context* mostly favours the marketer. This evidence points towards a wrongful definition of that personality trait as a trait of salespeople, but rather suggests that the trait describes marketers. When one would 'redefine' the second personality category as a predictor of a marketer profile in job advertisement, the results of the analysis would be as displayed in Table 12³.

| | Verbal and persuasive ability | | | Personal context | | | Short term, concrete and outcome driven | | | Long term, abstract and data driven | | |
|------------------------------------|-------------------------------|-------|--------|------------------|-------|--------|---|-------|--------|-------------------------------------|-------|--------|
| | LWC M | LWC S | Favour | LWC M | LWC S | Favour | LWC M | LWC S | Favour | LWC M | LWC S | Favour |
| All job advertisements | 0 | 4 | S | 3 | 1 | M | 3 | 2 | M | 2 | 0 | M |
| SME job advertisements | 0 | 1 | S | 0 | 0 | - | 3 | 2 | M | 2 | 0 | M |
| Large company job advertisements | 1 | 5 | S | 2 | 2 | M | 2 | 0 | M | 1 | 0 | M |
| Banking company job advertisements | 2 | 5 | S | 2 | 1 | M | 4 | 1 | M | 1 | 0 | M |
| FMCG company job advertisements | 0 | 2 | S | 2 | 0 | M | 1 | 2 | S | 1 | 0 | M |
| UK-based job advertisements | 0 | 2 | S | 1 | 1 | - | 0 | 1 | S | 1 | 0 | M |
| USA-based job advertisements | 0 | 3 | S | 3 | 0 | M | 3 | 2 | M | 2 | 0 | M |

Table 12; Altered results after changing the definition of the personality category *Personal context*

Table 12 shows that the outcome of the research differs much on the definitions of the personality traits. As is further discussed in the *Limitations* paragraph, more research into this aspect of linguistic profiling is required.

This can also be seen when discussing the results of the third personality aspect *Short term, concrete and outcome driven*, when looking at the 'Drives' word categories. The drives-word-categories describes the motivators *affiliation, achievement, power, reward and risk*. While the five drives are taken altogether as a predictor of a linguistic profile congruent with the salesperson, the first two

³ The author is inclined to not connect any conclusions to the results shown in Table 12, as post hoc changes to the research set-up does not show for much academic integrity. However, looking at a possible analysis of the results of Table 12, it shows that hypothesis (1) to (5) and hypothesis (7) could be accepted after changing the definition of the second personality category *Personal context*.

(affiliation and achievement) favour the marketer in most of the analyses (both favour the marketer in five analyses, and never the salesperson). Only the last drive (risk) seems to have a clear favour towards the salesperson (favouring the salesperson in five analyses, and never the marketer). This outcome incites the conclusion that it is possible to use the drives-categories in analysing linguistic profiling, however not as the five drives altogether, but rather as a reflection of the (professional) drive of each individual profession.

The data also shows that some linguistic word categories have a predisposition toward either the marketer or the salesperson. This can either come from a strong favourability towards that professional profile, or a strong disfavouring of the profile of the other profession. The analyses showed that the word categories of *Netspeak*, *Pastfocus*, *Discrepancy*, *Tentative*, *Numbers* and *Risk* have a high tendency towards being more present in job advertisements for salespeople. In contrast, the word categories of *Tone*, *Positive emotion*, *Affiliation*, *Achievement* and *Insight* tend to be more present in marketer-aimed job advertisements. Further research is suggested towards the link between these word categories and their respective professions in the use of linguistic profiles.

Conclusion

The purpose of this thesis was twofold. Firstly, to build a theoretical framework for showing the possible function and benefits that the use of linguistic profiling can have in the recruitment process. Similar to the message content, it was argued that the actual wording of the message - the linguistic form of the job advertisement - can influence the decision of a job seeker to apply, via the person-job and the person-organisation fit. In accordance with the theory on those fits, the job seeker must feel a belonging towards a specific position and/or organisation. To create this sense of belonging, the values and personality traits of the job seeker must align with the values of the job and the organisation. Using words from specific linguistic word categories can help transfer these perceived shared values and personality traits. In conclusion on the theoretical framework, it is suggested that the question 'What linguistic profile to communicate?' is added to the model of the Organisational Recruitment Process that Breaugh and Starke (2000) pitched.

The second purpose of this thesis was to test the use of linguistic profiling in contemporary human resource practices. The study conducted in this research finds evidence that suggests the use of linguistic profiling in some of the tested categories. On the other hand, many categories that were tested did not show the use of linguistic profiling in job advertisements. Possibly the method of testing, and the way the personality traits were composed in this study were not accurate enough to find results that suggested common use of linguistic profiling. Therefore, the conclusion of this thesis and the answer to the research question would be that, even though there is some evidence that does suggest the use of linguistic profiling, it is far from proven that recruitment managers do so. The final results are not conclusive and much further research has to be done in order to find the definite answer to the research question. The starting point for further research would be to build an academic base, from which the match between linguistic word categories and personality traits can be derived.

Limitations

The most restricting limitation to the results of this research is the way the personality traits are constructed on which the comparison between marketers and salespeople is based. Due to the limited research on the topic of words and language, no evidence-backed connections could be made between the linguistic word categories LIWC presents and how these categories combine in personality traits. Therefore, the combined categories that are used in this thesis to compare marketers and salespeople are chosen on a very subjective basis. In light of the scope of this research this might be not a large problem, as the study can be easily reproduced using the proper linguistic markers for the corresponding personality traits. In order to really understand how to use wording and language to appeal more to the 'ideal' candidate of a job advertisement, it is clear that more research has to be done to understand which linguistic word categories correlate with the specific personality traits. The same goes for any other use of linguistic personality profiling: it is important to have a solid framework which one can use to understand the underlying dependence of personality traits on the different categories. More research on this topic would be very relevant for many fields of science such as (neuro)psychology, (neuro)linguistics and (neuro)marketing and would shed more light on the use of wording and language in (corporate) communications.

The second major limitation of this research is its focus on marketers and salespeople. While the two job positions differ in many different aspects, the difference between the required (educational) background of these two functions is not very large in comparison with the differences between for example a marketer and an high school teacher or a salesperson and a physician. This might minimize the measured differences of the two possible linguistic profiles that may or may not be used in the job advertisements. Also, there is not much literature to be found on the differences in personality of marketers and salespeople, which forced the study to base its differences between the two functions on less academic sources. For a more distinctive nature of the researched linguistic profiles I would recommend to use more distinguishable job positions in light of a more academic framework. Also, more research has to be done on the personality traits of the 'ideal' marketer, salesperson or any other job position for that reason.

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Appendices

Appendix A(a) to A(d); In depth description of the personality aspects

References used (Pennebaker, Booth, Boyd, & Francis, 2015) (Pennebaker, Boyd, Jordan, & Blackburn, 2015)

Appendix A(a); Verbal and persuasive ability

| <i>Verbal and persuasive ability (favouring salesperson)</i> | |
|--|--|
| LIWC word category | Description |
| (1) Clout | Clout references to the confidence and the expertise a person speak or writes with. Higher numbers correlate with higher levels of confidence and expertise. The salesperson needs to speak with such a confidence to persuade his customer of his knowledge about the product. |
| (2) Pastfocus | Past-, present- and futurefocus indicates reference towards a specific period in time. Salespeople are expected to use these references to persuade the customer that a product has <i>proven</i> itself in the past, and will <i>continue to bring benefits</i> to the user in the present and in the future. |
| (3) Presentfocus | |
| (4) Futurefocus | |
| (5) Conjunctions | Words such as "and", "but" and "whereas" are supposed to be used by salespeople to guide the conversation in the direction that fits their purpose, therefore making conjunctions a useful tool for them. |
| - | - |
| <i>Informal language</i> | Salespersons are likely to try and establish a personal, more informal connection to their customers. Therefore, informal language is used as an indicator of verbal ability. Swear words (shit, damn), netspeak (btw, LOL), assent (OK, yes) and nonfluencies (uhm, err) are part of the informal vocabulary. |
| (6) Swear words | Discrepancy (should, would), tentative (maybe, perhaps), certainty (always, never) and differentiation (but, else) could therefore be useful categories. |
| (7) Netspeak | |
| (8) Assent | |
| (9) Nonfluencies | |
| (10) Discrepancy | |
| (11) Tentative | |
| (12) Certainty | |
| (13) Differentiation | |

Appendix A(b); Personal context

| <i>Personal context (favouring salesperson)</i> | |
|---|--|
| LIWC word category | Description |
| (1) Tone | Tone describes the level of emotional speech or writing of the text, with higher levels of tone expressing higher levels of emotional context. Salespeople are expected to use emotions to establish a bond between themselves and the customer. |
| (2) Authentic | Authentic refers to the level of 'personal vulnerability' and honest show of personality. The more authentic a salesperson seems to be, the larger his chances on a sincere and personal connection with his customer. |
| (3) First pers. sing. | First person singular words (I, me) and third person singular (he, she) are expected to be used by the salesperson to further stress the personal relationship between him and his customer. First (we, us) and third person plural (they, their) are expected to have a negative relation with the use by the salesperson, because those word categories indicate that the connection is less 'between the salesperson and his customer'. |
| (4) Third pers. sing. | |
| (5) First pers. plural | |
| (6) Third pers. plural | |
| - | |
| (7) Positive emotion | Just like the categories tone and authentic, the use of emotionally connected words can be used as a way to establish a meaningful connection with the customer. The effectiveness of emotional words are expected to be similar for positive (love, sweet) and negative (hurt, ugly) words. |
| <i>Negative emotion</i> | |
| (8) Anxiety | |
| (9) Anger | |
| (10) Sadness | |
| (11) Friends | As a very direct reference to the relation the salesperson expected to build with the customer, words referencing to other relations are assumed to be widely used in the approach of the salesperson. |
| (12) Family | |

Appendix A(c); Short term, concrete and outcome driven

| <i>Short term, concrete and outcome driven (favouring salesperson)</i> | |
|--|---|
| LIWC word category | Description |
| (1) Articles | Articles (a, an, the) are followed by a noun. This indicates the use of a concrete way of using language in written or spoken text. |
| (2) Interrogatives | The salesperson can use interrogative words (how, when) to keep a customer talking about the subject that is discussed. It raises questions that the customer might have overseen or has not thought of at all. |
| (3) Numbers | In contrast to quantifiers (few, many), numbers (second, thousand) are used to give a precise and concrete measure or amount. |
| - | |
| <i>Perceptual processes</i> | The salesperson is expected to make the sale as tangible as possible, in a sense that the customer already can 'see' himself using the product. |
| (4) See | |
| (5) Hear | Perceptual processes are tools of tangibility, therefore to be expected to be used in the context of sales. |
| (6) Feel | |
| <i>Drives</i> | The drive of the salesperson is, for the sake of this study, believed to be stronger than the drive of a marketer. Drives linguistic word categories |
| (7) Affiliation | take many forms such as affiliation (friendship, alliance) or power |
| (8) Achievement | (superior, bully), but specifically achievement (win, success), reward (prize, |
| (9) Power | benefit) and risk (danger, doubt) are expected to be significant parts of the |
| (10) Reward | salespersons personality. |
| (11) Risk | |

Appendix A(d); Long term, abstract and data driven

Long term, abstract and data driven (favouring marketer)

| LIWC word category | Description |
|---------------------------|---|
| (1) Word count | Word count indicates the amount of words that are used to compose the job advertisement. As the marketer is assumed to be data driven, the expected length of the marketer's job advertisement is longer. |
| (2) Analytic | A high level of analytical text corresponds with a formal and hierarchical writing or speaking style. On the contrary, low levels of analytic indicates a informal and personal style. In this case the marketer is linked to the former and the salesperson to the latter. |
| (3) Quantifiers | In contrast to numbers (second, thousand), quantifiers are used to give direction and weight to a measure or amount. |
| - | |
| (4) Insight | Words in the category insight (think, know) and causation (because, effect) |
| (5) Causation | are indicators of logical cognitive processes. These linguistic categories correspond with the assumed abstract and long term view of the marketer. |

Appendix B; List of categories used by LIWC2015

| Category | Abbrev | Examples | Words in category | Internal Consistency (Uncorrected α) | Internal Consistency (Corrected α) |
|-----------------------------------|-----------|----------------------|-------------------|--|--|
| Word count | WC | - | - | - | - |
| Summary Language Variables | | | | | |
| Analytical thinking | Analytic | - | - | - | - |
| Clout | Clout | - | - | - | - |
| Authentic | Authentic | - | - | - | - |
| Emotional tone | Tone | - | - | - | - |
| Words/sentence | WPS | - | - | - | - |
| Words > 6 letters | Sixltr | - | - | - | - |
| Dictionary words | Dic | - | - | - | - |
| Linguistic Dimensions | | | | | |
| Total function words | funct | it, to, no, very | 491 | .05 | .24 |
| Total pronouns | pronoun | I, them, itself | 153 | .25 | .67 |
| Personal pronouns | ppron | I, them, her | 93 | .20 | .61 |
| 1st pers singular | i | I, me, mine | 24 | .41 | .81 |
| 1st pers plural | we | we, us, our | 12 | .43 | .82 |
| 2nd person | you | you, your, thou | 30 | .28 | .70 |
| 3rd pers singular | shehe | she, her, him | 17 | .49 | .85 |
| 3rd pers plural | they | they, their, they'd | 11 | .37 | .78 |
| Impersonal pronouns | ipron | it, it's, those | 59 | .28 | .71 |
| Articles | article | a, an, the | 3 | .05 | .23 |
| Prepositions | prep | to, with, above | 74 | .04 | .18 |
| Auxiliary verbs | auxverb | am, will, have | 141 | .16 | .54 |
| Common Adverbs | adverb | very, really | 140 | .43 | .82 |
| Conjunctions | conj | and, but, whereas | 43 | .14 | .50 |
| Negations | negate | no, not, never | 62 | .29 | .71 |
| Other Grammar | | | | | |
| Common verbs | verb | eat, come, carry | 1000 | .05 | .23 |
| Common adjectives | adj | free, happy, long | 764 | .04 | .19 |
| Comparisons | compare | greater, best, after | 317 | .08 | .35 |
| Interrogatives | interrog | how, when, what | 48 | .18 | .57 |
| Numbers | number | second, thousand | 36 | .45 | .83 |
| Quantifiers | quant | few, many, much | 77 | .23 | .64 |
| Psychological Processes | | | | | |
| Affective processes | affect | happy, cried | 1393 | .18 | .57 |
| Positive emotion | posemo | love, nice, sweet | 620 | .23 | .64 |
| Negative emotion | negemo | hurt, ugly, nasty | 744 | .17 | .55 |
| Anxiety | anx | worried, fearful | 116 | .31 | .73 |
| Anger | anger | hate, kill, annoyed | 230 | .16 | .53 |
| Sadness | sad | crying, grief, sad | 136 | .28 | .70 |
| Social processes | social | mate, talk, they | 756 | .51 | .86 |
| Family | family | daughter, dad, aunt | 118 | .55 | .88 |
| Friends | friend | buddy, neighbor | 95 | .20 | .60 |
| Female references | female | girl, her, mom | 124 | .53 | .87 |
| Male references | male | boy, his, dad | 116 | .52 | .87 |
| Cognitive processes | cogproc | cause, know, ought | 797 | .65 | .92 |
| Insight | insight | think, know | 259 | .47 | .84 |
| Causation | cause | because, effect | 135 | .26 | .67 |
| Discrepancy | discrep | should, would | 83 | .34 | .76 |
| Tentative | tentat | maybe, perhaps | 178 | .44 | .83 |
| Certainty | certain | always, never | 113 | .31 | .73 |
| Differentiation | differ | hasn't, but, else | 81 | .38 | .78 |

| Category | Abbrev | Examples | Words in category | Internal Consistency (Uncorrected α) | Internal Consistency (Corrected α) |
|----------------------|--------------|----------------------|-------------------|--|--|
| Perceptual processes | percept | look, heard, feeling | 436 | .17 | .55 |
| See | see | view, saw, seen | 126 | .46 | .84 |
| Hear | hear | listen, hearing | 93 | .27 | .69 |
| Feel | feel | feels, touch | 128 | .24 | .65 |
| Biological processes | bio | eat, blood, pain | 748 | .29 | .71 |
| Body | body | cheek, hands, spit | 215 | .52 | .87 |
| Health | health | clinic, flu, pill | 294 | .09 | .37 |
| Sexual | sexual | horny, love, incest | 131 | .37 | .78 |
| Ingestion | ingest | dish, eat, pizza | 184 | .67 | .92 |
| Drives | drives | | 1103 | .39 | .80 |
| Affiliation | affiliation | ally, friend, social | 248 | .40 | .80 |
| Achievement | achieve | win, success, better | 213 | .41 | .81 |
| Power | power | superior, bully | 518 | .35 | .76 |
| Reward | reward | take, prize, benefit | 120 | .27 | .69 |
| Risk | risk | danger, doubt | 103 | .26 | .68 |
| Time orientations | TimeOrient | | | | |
| Past focus | focuspast | ago, did, talked | 341 | .23 | .64 |
| Present focus | focuspresent | today, is, now | 424 | .24 | .66 |
| Future focus | focusfuture | may, will, soon | 97 | .26 | .68 |
| Relativity | relativ | area, bend, exit | 974 | .50 | .86 |
| Motion | motion | arrive, car, go | 325 | .36 | .77 |
| Space | space | down, in, thin | 360 | .45 | .83 |
| Time | time | end, until, season | 310 | .39 | .79 |
| Personal concerns | | | | | |
| Work | work | job, majors, xerox | 444 | .69 | .93 |
| Leisure | leisure | cook, chat, movie | 296 | .50 | .86 |
| Home | home | kitchen, landlord | 100 | .46 | .83 |
| Money | money | audit, cash, owe | 226 | .60 | .90 |
| Religion | relig | altar, church | 174 | .64 | .91 |
| Death | death | bury, coffin, kill | 74 | .39 | .79 |
| Informal language | informal | | 380 | .46 | .84 |
| Swear words | swear | fuck, damn, shit | 131 | .45 | .83 |
| Netspeak | netspeak | btw, lol, thx | 209 | .42 | .82 |
| Assent | assent | agree, OK, yes | 36 | .10 | .39 |
| Nonfluencies | nonflu | er, hm, umm | 19 | .27 | .69 |
| Fillers | filler | Imean, youknow | 14 | .06 | .27 |