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**Técnicas de Programação Neuro-linguística:
ferramentas aplicadas para aumentar a eficiência das
interações organizacionais**

**Neuro-linguistic Programming's approaches in a
corporate environment: techniques applied to
further the efficiency of organizational interactions**



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Tese apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Mestre no Mestrado de Gestão, realizada sob a orientação científica da Prof. Doutora Andreia Tatiana Vitória, Professora Auxiliar Convidada do Departamento de Economia, Gestão, Engenharia Industrial e Turismo da Universidade de Aveiro.

Dedico este trabalho à minha Mãe e ao meu Pai, que são os mais responsáveis pela pessoa que me orgulho de ser hoje... E ao Armin van Buuren, pelas horas ininterruptas de *trance* que me ajudaram a redigir esta obra.

o júri

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palavras-chave

programação neuro-linguística; eficiência; organizações; psicologia de trabalho; relações interpessoais

resumo

O presente estudo visa demonstrar, através de hipóteses, como aumentar a eficiência dos intervenientes organizacionais em contingências como a liderança, vendas e motivação usando técnicas e ferramentas de Programação Neuro-linguística (PNL). A recolha dos artigos fez-se através das bases de dados Scopus e Web of Science. O número total de resultados relacionados com PNL (181) espelha a escassez de informação que há sobre o tema. As hipóteses foram formuladas depois de uma explicação das várias técnicas de PNL. As sugestões do seu uso foram, conseqüentemente, propostas sob o ponto de vista dos autores. Sugerimos uma análise posterior destes cenários, para averiguar se os resultados se verificam.

keywords

neuro-linguistic programming; efficiency; organizations; work psychology; interpersonal relationships

abstract

The goal of this study is to demonstrate, through hypotheses, the way to enhance stakeholders' efficiency in contingencies, such as leadership, selling and motivation while applying Neuro-linguistic Programming's (NLP) techniques and tools. The articles were retrieved from Scopus and Web of Science. The scarcity of the number of total NLP-related papers (181) reflects the lack of information existent on the subject. The hypotheses were formulated after an explanation of the various techniques NLP offers. The suggestions of its use were, consequently, proposed based on the authors' point of view. We suggest further analysis of these scenarios, so as to ascertain if the results are corroborated.

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Introduction

Introduction

The world of organizations is characterized by the complexity, uncertainty and unpredictability of the environment, which have increased the interest for enhancing the effectiveness of employees' activities (Ratiu, David, & Baban, 2017). This dissertation focuses on the effect that Neuro-linguistic Programming (NLP) may have on them.

Completing a task as effectively as one could, while inputting the optimal quantity of effort required is a feat everyone strives for. This is valid for matters such as self-development, employee motivation, problem solving, selling, training, corporate communication, among other fields. In this thesis, we are going to delve into the organizational aspect of NLP.

According to O'Connor and Seymour's *Introducing NLP* (2011), NLP is the art and science of personal excellence. By allocating the right mental resources, people can perform a designated task at their full potential. This makes NLP the ideal subject for the author to research upon. NLP emerged in the 1970's from the University of California, USA. Richard Bandler and John Grinder, the original developers of NLP, were involved in mathematics and linguistics (Kong & Farrell, 2012).

Relevance

Being a Master's student in Corporate Management, the researcher is continuously looking for ways of producing an output, while optimizing the inputs' usage. Adding up to that is the fact that he has always been fascinated by human psychology, human interactions and their analysis. What do people gain from adopting certain behaviors and why intrigues and prompts the investigator of this thesis to further understand this field of study. This is where NLP comes into play. During his teenage years, the researcher began exploring literature on marketing strategies' influence on the minds of people, and he noticed that there was one notion that was constantly being referenced - NLP. The curiosity around this concept became stronger as the years went by - What is it? How can people use it? To what extent could people's abilities expand if they use it? - Then, the perfect opportunity to answer all of his questions thoroughly appeared in the form of this dissertation.

The aim of this thesis is, on a first stage, to explore and analyze the literature related to NLP, focusing on its business application aspect. We will identify how this field is organized in terms of publications and how they are grouped. On a later phase, we intend on offering some thoughts for consideration of the benefits that NLP may have when applied in certain contingencies within an organization. We wish also to stimulate further research, reflection, debate on the subject.

An additional motivational factor for writing this study is the possibility of the researcher contributing to the discussion of the scientific validity of NLP. Ever since he examined papers on NLP, he found some that discredited its tenets. This fact encouraged him to investigate more on this aspect and truly find out if this field of psychology is, in fact, scientific, or just a hoax.

This dissertation will be comprised of five chapters (*Introduction, Literature Revision, Research Method* and the *Discussion of NLP and its Implications in the Organizational Spectrum*, and the *Conclusion*).

In the first chapter, the literature revision will be detailed. Here we will explain the overall concept of NLP, some techniques and tools used in NLP, the integration of NLP in an organizational context, and finally a sub-chapter on the question of whether NLP should be considered a valid scientific field or not. In this part we will show the arguments both in favor and against NLP. After weighing in both sides of the debate, our opinions in the matter will be discussed.

In *Research Method*, we will mention the databases that were used. The keywords used to search those databases will be disclosed. We will also comment on the total number of articles found and which ones were considered valid for this research, as well as, the amount of those that were successfully obtained. Finally, we will justify our choice of articles analyzed after the search.

Afterwards, in the chapter *Results and Discussion of NLP and its Implications in the Organizational Spectrum* we will demonstrate and explain this by the use of histograms and bibliometric analysis. Additionally, three situations that are idiosyncratic of a business environment - *leadership, selling* and *motivation* - and the problems that usually are associated with them will be described. After each issue is explained, we propose the usage of certain NLP techniques to make the interactions more efficient.

In the final chapter, we will conclude this thesis by summarizing what we found out, suggest future steps to continue this research and comment on the limitations that we faced when writing the dissertation.

Literature Revision

Literature Revision

1.1. Concept of NLP

NLP is a set of techniques that develops individual excellence and also establishes a system of empowering beliefs (McDermott & Jago, 2011; Rao & Kulkarni, 2010). NLP's core view is that each individual has a whole mind-body system with patterned connections between internal experience (neuro), language (linguistic), and behavior (programming) – It indicates a technical understanding of the brain (Bovbjerg, 2011; Tosey, Mathison, & Michelli, 2005).

Being developed in the mid-1970's by Richard Bandler and John Grinder at University of California, Santa Cruz (Pishghadam & Shayesteh, 2014; Wake & Leighton, 2014), NLP is a therapeutic method which is inspired in many tendencies within the scope of psychology, such as Gestalt therapy, hypnotherapy, body therapy, neurology, etc. (Bovbjerg, 2011). It started as a study on how people process information, construct and interpret meanings and perform skills to achieve results (Tosey & Mathison, 2008). The creators closely examined the communication patterns of psychotherapists such as Milton Erickson, Virginia Satir and Frits Perls (Tosey & Mathison, 2009). According to Dilts (1983), we, as individuals, store experiences both consciously and unconsciously through our senses. However, the majority of the neurological processes are made unconsciously. Bovbjerg (2011) claims that the relation between consciousness and unconsciousness can be transformed by changing the way we perceive the world. This can be achieved through language, which is the way we bring order to our thoughts and how we communicate with others. It was the wish to understand how certain individuals were high achievers that made Bandler, Grinder and later Andreas (1979) want to delve into the subject and identify the specific methods that these people undertook to achieve excellence. The final objective of this was to then teach these methods to others in order to improve performance.

According to some authors, NLP can be defined in various ways, such as the art of communication excellence or the study of the structure of subjective experience (Barton, 2011; Tosey et al., 2005). Bandler (1985) defines NLP as a method of teaching people how to use their brain through modelling excellence.

Mathews (1997) states that human beings live based on their habits. A person learns things, repeats them, and after some time they convert those into habits or a patterned sub-routine which will work automatically when the trigger is fired. This can work in a positive way (i.e. when someone is learning how to operate a motor vehicle, driving will tend to become near-unconscious after a while) or in a bad way (i.e. reacting badly to someone touching one's face, due to past trauma). NLP's goal, therefore, is to change the cognitive patterns that are not good for us and turn them into useful ones. Mathews

(1997) explains that these patterns or responses may have been suitable when someone first tried them. However, due to the changes that individuals experience as time passes by, these patterns may become inappropriate. What this does is sabotage and prevent individuals from making the most out of opportunities. NLP can eliminate negative reflex associations by reprogramming people to access other more empowering emotional states, skills and abilities.

NLP presents itself as a set of techniques that we should all be aware of. It represents a model of human behavior that can dramatically improve communication skills, empathy, and troublesome thought processes (Roderique-Davies, 2009).

1.2. NLP in organizations

Nowadays, trainers and coaches strive to help companies by building competitive advantages. These advantages involve reducing costs to the manufacturer and increasing value to the customer. This is done by increasing the productivity of people, machines and materials as well as by adding value through service, design, engineering and performance (Lavan, 2002). Individuals carry human capital when they join an organization, which increases in value through time within the company. In principle, the higher value of the human capital, the greater the productivity and higher the incomes or compensations. However, by losing employees, the company may be in risk of loss of organizational memory, making this a threat to it. This is because individuals take their talent, skills and tacit knowledge when departing. Thusly, human capital is volatile by nature. Due to this reason, human resource managers need to recruit and develop the best and brightest employees as a means of achieving competitive advantage. A way to achieve such goal is resorting to NLP (Kong, 2011). NLP proposes and describes the development of proper communication in a working and personal environment, explain Koulouris, Sakas and Giannakopoulos (2015). They continue by saying that success in the workplace and the achievement of objectives depends not only on the skills, experience and abilities. Communicational skills of a person and his/her tolerance is also key. NLP has the power of increasing the impact that a person has on others. It also orients and aids the person in developing self-knowledge and techniques that will facilitate the achievement of goals. Communicational difficulties in the workplace hinder the evolution and development of a healthy organization and lead to conflicts between partners, unproductive relationships, secretiveness, lack of trust and negligence, which will ultimately translate into the lowering of human capital. NLP in companies aims to settle these issues by expanding the horizons of thought, understanding different views and focusing on the positive side of events.

Since its introduction, the use of NLP has spread rapidly worldwide (Karunaratne, 2010) in a wide array of fields (i.e. psychotherapy, business and education) (Tosey et al., 2005; Zastrow, Dotson, & Koch, 1987). It is very popular in countries such as Japan and Denmark, for example (Bovbjerg, 2011; Kotera, 2018). Kotera (2018) says that Japan has certified 1725 practitioners, 1321 master practitioners, 373 trainer associates and 40 trainers, which symbolizes the increase in popularity of NLP in that country. Knight (2007) argues that NLP has been a popular method in private companies and public organizations in Denmark since the 1990s. Since that time period, NLP trainers coached companies' employees with courses based on the method. Although it is difficult to specify, many companies that are implementing NLP notice some cost reduction. This may be due to staff turnover reduction. The organization becomes knowledge focused and thusly the fewer people leave the company (Singh & Abraham, 2008).

However, still there are many companies that are reluctant to utilize its potential or have experienced the tools and techniques (Wake, 2011). NLP has not been completely embraced by the traditional therapy community nor by the academics. Since NLP is not based on empirical research, it is highly discredited by the latter (Barton, 2011).

1.3. NLP's tools and techniques

1.3.1. Preferred Representational System (PRS)

In their book, *The Structure of Magic*, Bandler and Grinder (1975) defended that we, as people, perceive the world through a range of filters, such as social and cultural factors, past experiences and memories. All of these elements shape the way we view the world and how we interact with it. It is the old example of the man who gets upset when the weather starts becoming windy and chilly, whereas another man starts feeling happy because he sees an opportunity to grab his surf board and catch some fantastic waves. Due to the aforementioned factors, we distort, delete and generalize the information received from the external world (Skinner & Stephens, 2003). Bandler and Grinder (1975), subsequently, introduced the notion that people represent their own idea of the world based on sensory modalities. We process and recall external information through sensory system representations. These representations can be (Davis & Davis, 1991):

- **Visual (pictures);**
- **Auditory (sounds); and**
- **Kinesthetic (feelings).**

Sadowski Jr. and Stanney (2002) explain that people may recall memories through real or constructed images (remembering the shoes you are currently wearing and thinking of them as if they were pink). Memories can also be constructed by the auditory system, which encompasses external sounds, remembered or contrived internal sounds and internal dialogue (the sound a dolphin makes and the sound of your best friend talking while using a Darth Vader helmet). Finally, one can summon memories when accessing the kinesthetic system. Tactile sensations can be the imagination of external forces acting on the body or emotional responses (feeling the 'weight of the world on one's shoulders' and feeling excited). Practitioners of NLP claim that people tend to have one preferred representation system over another in a given context (Ghacmi & Janvier, 2004). O'Connor and McDermott (1996) argue that human beings share the same basic neurology, yet we each see, hear and feel the world very differently. Although we receive information through the five senses - sight, hearing, feeling, taste and smell -, we process that external information through a preferred system of representation of the world.

1.3.2. PRS in communication

The NLP method of communication using the PRS is a useful approach when we want to establish rapport and commonality with others as they will find relatability through the words we use to communicate with them (Linder-Pelz & Hall, 2007). As Lavan (2002) states, a person who predominately thinks in pictures will use mainly 'visual predicates', words such as 'see, perspective, vision, scene' and would use phrases in the lines of 'that is too vague, I need to see that in black and white; I am glad we see eye to eye'. People whose thought processes favor sounds utilize, mainly, 'auditory predicates', which translates to words such as 'say, tell, tune, speak' and would use phrases similar to 'let's talk things over, something tells me this will not work; I hear you loud and clear'. People who use feelings to think will use mainly 'kinesthetic predicates', words such as 'grasp, solid, balance, firm, feel' and are likely to use phrases like 'It is weighing on my mind; carry the project through; he is a frigid customer'. While conversing, not matching PRS may lead to confusion and lack of understanding, as Lavan (2002, p.185) demonstrates with this story:

"I REMEMBER WELL, ONCE TRAINING PREDICATES TO A GROUP OF BUSINESS PEOPLE. WHEN I SENSED I HAD LOST ONE OF THE DELEGATES WHO WAS HIGHLY VISUAL, I CHANGED MY PREDICATES TO MEET HIS WORLD AND TO BRING HIM BACK TO THE TRAINING. HOWEVER, HE WAS DEEP IN HIS MIND MAKING PICTURES. I SOON STOPPED WHERE I WAS AND ASKED HIM WHAT HAD LIT UP. [...] HIS ANSWER WAS 'I WORK VIRTUALLY ALL THE TIME IN THE MUSIC AND

BROADCASTING INDUSTRY AND HAVE JUST REALIZED ALL OUR MARKETING MATERIAL IS USING HIGH VISUAL PREDICATES'. WONDERFUL THING MIRROR MARKETING!" (LAVAN, 2002, P.185)

1.3.3. Sub-modalities

Bandler and MacDonald (1988) claim that each of the NLP sensory representations can be broken down more finely as 'sub-modalities'. These sub-modalities are the characteristics of our thought patterns, how each inner sense is composed (Alder, 1992). For instance, we can recall or construct memories by thinking of the size or focus (visual), the volume and pitch (auditory), or the temperature and pressure (kinesthetic). Figure A explains this concept in more detail:

Representation Systems	Visual	Auditory	Kinesthetic
Sub-modalities of the representational systems to the describe the experience of 'location'	Size; Distance; Brightness; Focus; Colors (or lack thereof); Frame; Motion.	Volume; Pitch; Tempo; Rhythm; Intensity; Motion;	Temperature; Pressure; Intensity; Scope.

Figure A – The sub-modalities of each representational system (Adapted from Tosey & Mathison, 2010)

Individuals can also notice their own PRS or others' by listening to the way they talk. As Fan, Gu and Zheng (2010) explain, visual people speech relatively fast, having a high-pitched and clear voice. Their voices are loud and they communicate by using brief sentences; auditory people have a pleasant speech, which is self-assured, full of rhythm, and moderate speed, with a steady flow of words; kinesthetic people, generally, have a low and soft voice, they speak slowly and frequently use pauses (Brown, 2004; Ludwig & Menendez, 1985).

Additionally, O'Connor (2001) states that we may discover people's PRS by paying attention to the way they breathe. A 'visual' person will have a shallow and high breath, whereas an 'auditory' one will breathe evenly. Lastly, a kinesthetic individual will have deep breaths more often. Figure B illustrates this notion:

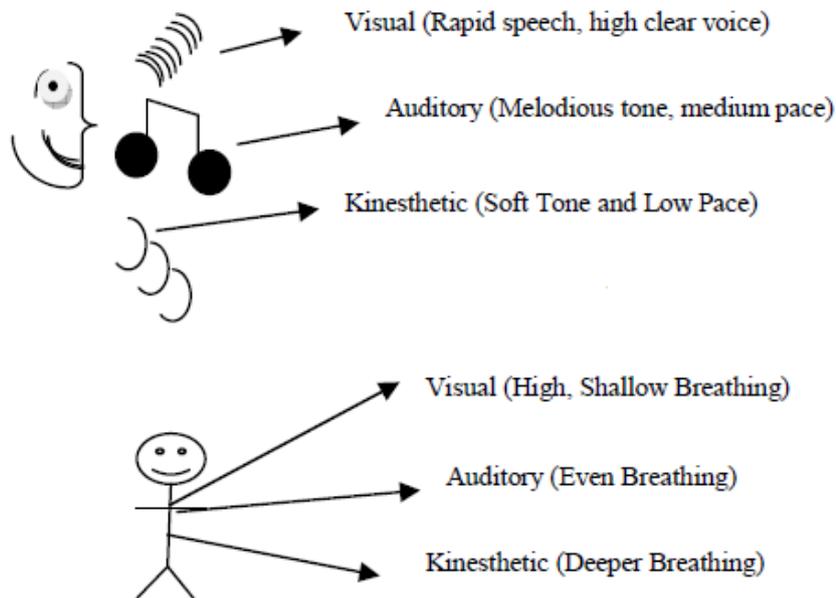


Figure B – How we speak and breathe may uncover our PRS (O’Connor, 2001)

1.3.4. Eye Accessing Cues

There is a model created and used by NLP specialists that uses the positions of the iris inside the eye as an indicator of the internal thinking mechanisms of a person (Florea, Florea, & Vertan, 2016). This model is called Eye Accessing Cues (EAC). It argues that the direction of the gaze can be used to determine the internal representational system employed by a person. This is observed when individuals recall memories, be it by storytelling or answering a question, for example. When answering or recalling an event, they may use their visual, auditory or kinesthetic memory. EAC are not unanimously accepted, as Sturt et al. (2012) argue, calling for more tests. Vrânceanu, Florea, Florea, and Vertan (2013), when attempting to gain better insight of the facts, showed that while EAC is not 100% accurate (i.e. universal), the correct apparition rates were higher than random chance, especially between visual, auditory and kinesthetic ways of thinking (corresponding to a separation along the vertical axis of the gaze direction) (Florea, Florea, & Vertan, 2016). The different directions of the gazes and its correspondent meanings are shown in the following figure, as if the reader was standing in front of the person:

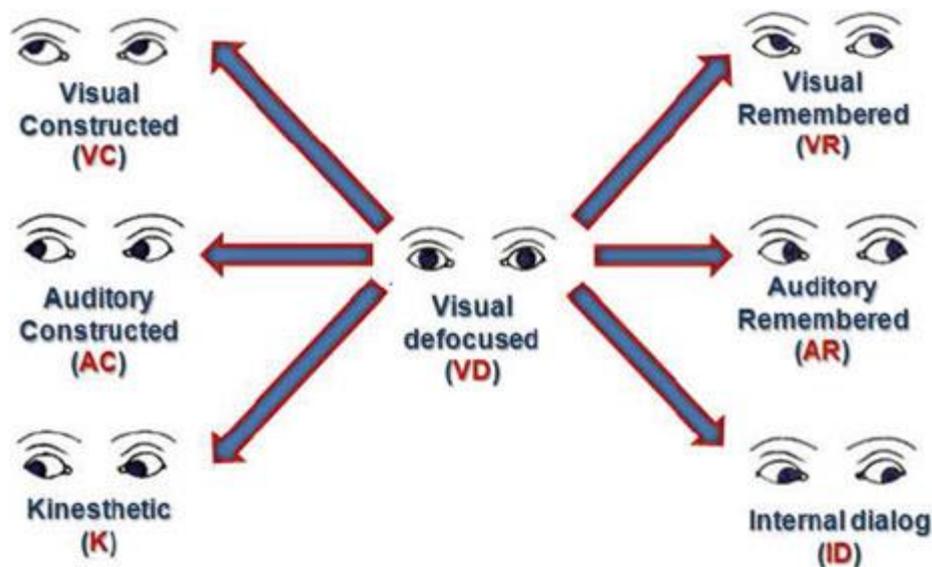


Figure C – The direction of the gaze may let the observer know how the person is thinking. These would be the directions of the sight of someone facing us, when recalling something. (Florea, Florea, & Vertan, 2016).

By analyzing the figure, we can understand that when looking:

- **By looking straight ahead, someone may be recalling a defocused visual memory;**
- **Up and to the right means someone is thinking of the images of something that happened, in fact;**
- **Up and to the left may indicate that the person is constructing a picture in their head;**
- **Looking to the right means that someone is remembering a sound that they indeed heard;**
- **When imagining sounds, individuals will look to the left;**
- **If they look down and to the right, they might be having an internal dialog; and**
- **By gazing down and to the left, that person may be thinking of how something felt.**

1.3.5. The importance of building rapport

“People who are like each other, like each other” (Wake, 2010, p.89)

In NLP it is assumed that rapport building is a communicational process where the practitioner evaluates the clients' situation, state of mind and understanding. For that to happen, commonality traces should be established between the practitioner and others (Beaver, 1989). Here, relatability is key to establish a healthy rapport. In the words of Wake (2010), rapport is a process that many of us do naturally and is normally only taught in sales-based programs. This means that the social sciences such as coaching, therapy or HR overlook rapport establishment. Wake (2010) goes on by explaining

that rapport is a process of responsiveness in which the client's unconscious mind will uncritically take on suggestions offered to it.

In their research, Argyle, Salter, Nicholson, Williams, and Burgess (1970), came to the conclusion that there are three components in any message that people examine to decipher its meaning. Each element has a different 'weight'. For instance, 55% of the meaning of a message is inferred by observing the physiology of another person. Following that, 38% meaning is deduced from the voice qualities that we hear. Lastly, only 7% is interpreted through the words that are used. Figure D depicts this explanation.

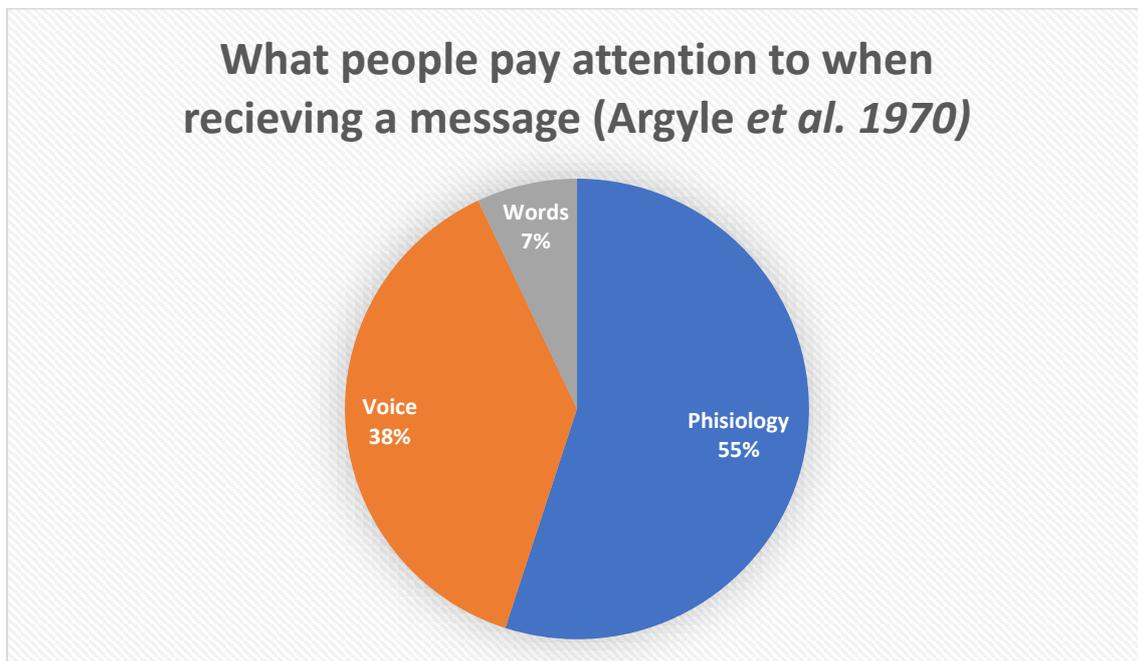


Figure D – What we pay attention to when someone conveys a message (Argyle et al., 1970)

1.3.6. Pacing and Leading

Cremona (2016) argues that creating a rapport with people can be done in so many different ways; one can for instance follow the breathing patterns of a person, copy their body language without being too obvious, adopt the same words that the other person uses, among many other ways. This matching is called *pacing*, which is not the same as mimicking, as Beaver (1989) states. Pacing is establishing the bridge through rapport and respect (O'Connor & Seymour, 2011). In their studies, Argyle et al. (1970), found out that non-verbal communication has three main functions:

- **conveying interpersonal information through body language;**
- **aid verbal communication with non-verbal signals such as grunts or head nods; and**

- **to replace speech, when environmental factors such as noise or in a large group impede verbal communication.**

Verbal communication is used for conveying factual information (Wake, 2010). The NLP method establishing of rapport is characterized by having practitioners mirror such things as client posture, breathing rate, PRS language, and tonal shifts (Buckner, Meara, Reese, & Reese, 1987; Cremone, 2016). What to and how to match can be examined in the following table, adapted from Wake (2010).

Table I – The communicational variables one can change in order to successfully create rapport (adapted from Wake, 2010)

Physiology	Breathing; Posture; Gestures; Eye Contact; Facial Expression; Style of Clothing.
Voice	Tone; Tempo; Timbre; Volume.
Words	Key words and phrases; Predicates (<i>often the describing words that someone uses</i>); Common Experiences; Chunk size (speaking in detail or the abstract).

In order to pace and lead successfully, paying attention to the other person and flexibility are fundamental skills (Lavan, 2002; O'Connor & Seymour, 2011). In an organizational context, as Wake (2011) mentions, pacing is more complex. Focusing on outcomes using the NLP outcome model can help pace the organization by clearing identifying needs that are related to an outcome. In meetings

and negotiations, Smith (2002) observed that outcome-based thinking, sharing and introducing the outcome through the different preferred modalities and establishing a good rapport between workers drastically increases effectiveness of a meeting. When participating in a sales meeting, pacing can be used to facilitate a positive outcome. In conflict situations, it is useful to pace to ease the tensions between the parties. When negotiating, it helps people feel at ease. It can, also be utilized in interviews to perceive what is going on a person's mind and what he/she is really thinking and feeling (Wake, 2011).

Leading is changing your behavior so the other person follows, according to O'Connor and Seymour (2011). Leading will not work without rapport. Leading may also be used to intervene as the client is encouraged to have more useful behaviors, thought processes and actions (Beaver, 1989). O'Connor and Seymour (2011, p.69) briefly explain pacing and leading with the following example:

“WITH AN ANGRY PERSON, MATCH [PACE] THEIR ANGER A LITTLE BELOW THEIR LEVEL. IF YOU GO TOO FAR, THERE IS A DANGER OF ESCALATION. ONCE YOU HAVE MATCHED, YOU CAN START TO LEAD THEM DOWN GRADUALLY INTO A CALMER STATE BY TONING DOWN YOUR OWN BEHAVIOR [LEADING]. A SENSE OF URGENCY CAN BE PACED AND MATCHED BY VOICE TONALITY, SPEAKING A LITTLE LOUDER AND QUICKER THAN USUAL. THIS SORT OF EMOTIONAL PACING AND LEADING IS A POWERFUL TOOL IN COUNSELING AND THERAPY.” (O'CONNOR & SEYMOUR, 2011, P.69)

1.3.7.Reframing

The human being is of a creature of habits, which are created through repetition. As we mentioned beforehand, after some time, these patterns become sub-routines, which are triggered automatically when a certain situation calls upon them (Mathews, 1997). This can be very useful for everyday situations in life, because it simplifies mental processes and allows the brain to focus on other activities (i.e. driving a car and being able to talk to the passengers simultaneously). However, this also has a negative side to it. Mathews (1997), comments that sometimes individuals assimilate patterns that are not so useful in the present moment. Processes that once might have been useful, can now be a hindrance to the accomplishment of new goals or tasks. The end result of this is being sabotaged by behaviors that are not adequate to the present state (i.e. children who became accustomed to hear that they are not sufficiently intelligent by teachers or parents develop a mental pattern that produces a feeling of inadequacy, which may create a stigma in the brain of the now adult person, hindering that individual when learning new concepts).

This is where reframing comes. Reframing is a skill of NLP that changes the meaning of an experience, by altering the perception of the situation, into a more productive one (O'Connor & McDermott, 1996;

Watzlawick, Weakland, & Fisch, 1974). NLP uses the concept that it is easier to restructure a cause and effect relationship, using the same basis as the original relationship and creates a new meaning for the user. This is called meaning reframing (Andreas & Andreas, 1987). Reframing provides clients with a different perspective on themselves and events/contexts in their lives, leading to a new interpretation of existing information. That enables people to feel positive towards new and/or challenging endeavors, such as, for example their next job application (Robert Dilts, Grinder, Bandler, Bandler, & DeLozier, 1980; Kotera, 2018). The underlying assumption, according to Dilts *et al.* (1980), is that there is no such thing as positive or negative information. Rather, every information or attribute is useful in its specific context.

“BANDLER AND GRINDER (1982) DEMONSTRATE THIS CIRCUMSTANCE BY REFERRING TO A FAMILY THERAPY SESSION, IN WHICH THE FATHER CONTINUOUSLY COMPLAINED ABOUT HIS DAUGHTER BEING STUBBORN. THUS, THE PSYCHOTHERAPIST SEARCHED FOR A CONTEXT IN WHICH THE DAUGHTER’S BEHAVIOR WOULD HAVE A POSITIVE MEANING IN THE FATHER’S PERCEPTION. BECAUSE THE FATHER HAD BEEN A SUCCESSFUL BUSINESSMAN, THE THERAPIST POSITIONED THE STUBBORNNESS WITHIN THE CONTEXT OF THE DAUGHTER BEING DETERMINED WITHIN HER JOB. WHEN THE FATHER REALIZED THAT HIS DAUGHTER HAD ADOPTED HIS BEHAVIOR TO BECOME MORE SUCCESSFUL, HE FELT PROUD OF HER” (DILTS *ET AL.*, 1980, P.947).

Reframing enables the perception of one’s own personal characteristics positively. Difficulties can be transformed into learning opportunities which may lead to the improvement and achievement of predetermined goals in life as well as in issues of a social and emotional nature (Mathews, 1997). Savickas (2005) notes that consultants find reframing useful, because the meaning clients bring to their career behavior and decisions is crucial in career guidance. It is also useful when reviewing one’s life context and identity, in order to make sense of their experience (McMahon & Watson, 2013). The ultimate goal of reframing is the acceptance of the new interpretations by the individuals (Neudecker, Esch, Schaefers, & Valussi, 2014).

1.3.8. Anchoring

Emotional states have a powerful and pervasive influence on people’s thought processes and behaviors. Each one has a personal history filled with different emotional states. In order to revisit those states, only a trigger or association is needed in the present to elicit the original experience. A stimulus which is linked to the experience that triggers a physiological state is called an anchor in NLP (O’Connor & Seymour, 2011).

An alarm clock ringing may remind a person of his/her job and thus, elicit positive or negative emotional states, depending on what that individual thinks of work. In this case, the ringing of the alarm functioned as an auditory anchor that brought along with it an emotional state.

Anchoring is the process through which an emotional state is associated with certain external triggers provoking a certain answer. This answer can be fast, hidden or revisited. This NLP concept is inspired by the Pavlovian stimulus where every action must be followed by its reaction (Furduescu, 2016).

Our minds naturally link experiences. It is the way we give meaning to what we do. An important part of NLP is understanding and maneuvering through the various anchors in our lives. Sometimes these associations are pleasant; for example, walking into a bakery and smelling the scent of freshly baked bread may elicit memories and feelings of nostalgia (Barton, 2011). If someone was abused as a child, that person may have actually shut that experience out of consciousness. This traumatic experience may create an anchor which can be translated to breaking a sweat and panicking if someone touches them. The content may have been shut out of the conscious mind, but the anchor is firmly in place (Barton, 2011; O'Connor & Seymour, 2011).

Most associations are very useful, while other associations are not. Many people associate speaking in public with anxiety and mild panic attacks, thus hindering from expressing themselves effectively.

1.3.8.1. How are anchors created?

According to O'Connor and Seymour (2011), in one of two ways:

- 1. Repetition (Witnessing repeated instances of red being associated with danger, will create an anchor, which will be translated to: red means danger)**
- 2. In a single instance if the emotion is strong and the timing is right.**

Repetition is only needed if there is no emotional involvement. For example, in school something interesting and exciting was always easy to learn. Facts that did not spark interest needed repetition. The less emotionally involved one is, the more repetitions are needed to learn the association.

In organizations NLP is crucial in changing behavior through, for example, anchoring new behaviors against new requirements, policies and procedures (Pollitt, 2010).

1.3.9. The 3M Model

The 3M Model is a conjunction of three NLP fundamental elements: The meta model, the metaphor and the Milton model. This overall model serves the purpose of enhancing the effects of its

components and of improving communicational aspects (Furduescu, 2016; Zaiț & Spalanzani, 2006). Zaiț and Spalanzani (2006) define the 3M method as a “set of principles, rules and means of knowledge and transformation of reality which, in a purely physical sense, becomes a system of principles, rules and means of knowledge and transformation of reality” (Zaiț & Spalanzani, 2006, p.137).

The three components of the 3M model are briefly explained in this table (Wake, 2011):

Table II – The three parts of the 3M model

Name	Description
Meta model	A structured series of language patterns that identify how someone is really thinking;
Metaphor	Using a story or analogy to get a specific idea across, help find new solutions and to overcome certain communication barriers (Furduescu, 2016; Wake, 2011);
Milton model	The use of artfully vague and ambiguous language that facilitate positive and creative thinking that is unconscious and obtain maximum performances and efficiency (Furduescu, 2016; Wake, 2011).

1.3.9.1. Meta Model

In their book, *The ultimate introduction to NLP: How to build a successful life*, Bandler, Roberti, and Fitzpatrick (2013) explain that the meta model has three main functions:

- **to specify information;**
- **to clarify information; and**
- **to help a person open up their model of the world.**

Bandler and Grinder developed the meta model when they began observing linguistic patterns of people when they communicate by using Noam Chomsky’s transformational-grammar-of-language.

They noticed that when individuals speak, they possess what they called a *deep* structure, which is unconscious and represents the purest state of their sensory experiences. However, people shorten this experience for communication sake. This happens due to several human limitations, which will be explained later. This is what is called the surface structure. When converting the message from the deep to the surface structure, people unconsciously employ filters, which can be classified as deletions, distortions and generalizations (Cassidy-Rice, 2014; O'Connor, 2012). Cassidy-Rice (2014) proceeds by stating that, individuals have their own personal filters which are different from person to person. This happens due to various factors, such as personal upbringings, cultural backgrounds, gender and so on and so forth.

The meta model was created to help individuals overcome their personal filters and to undertake a reality check on their view of the world (Cassidy-Rice, 2014). Basically, the meta model challenges generalizations, distortions and deletions that people create and paves the way for new and effective ways to clarify the individual's use of language, and ways of making sense of the world. This is crucial to identify the difficulties that the person is having (Beaver, 1989).

As mentioned previously, when conveying a message, an individual will transport it from the deep structure to the surface structure. Furduescu (2016) comments that questions regarding meta model act as a 'reverse engineering' process on language. This means that when working on the surface structure, the NLP practitioner will gain a better understanding of the unconscious part through the use of queries. When transitioning from *the* deep structure to surface structure, the message passes through the following filters (Furduescu, 2016; Goetz & Rupp, 2003):

Table III – The perceptual filters we use to transform messages

Filter	Description
Deletion	<i>Deletion</i> of a part of the information available in the deep structure, which limits thinking. It is the linguistic counterpart of perceptual focus. It simplifies and reduces statements. This reduction is quite helpful in normal communication but it also causes the loss of potentially important information that may seem unimportant to the speaker.
Generalization	This is where people assign a universal value, based on a limited personal experience, all conditions and exceptions that would make a discussion boring or contradictory, which reduces the range of possibilities. These universal words frequently are words such as “never”, “always”, “none”, “all”, “any”. To abstract from concrete experiences is useful and vital for humans. By doing so we can establish correlations between similar experiences.
Distortion	When we distort a message, we are basically simplifying it, which limits the interpretation options, modifies the meaning and leads to other useless problems. This useful for us because by doing so we prevent our knowledge from being reorganized constantly. Details are changed if necessary to fit in the picture we have already drawn from a given situation.

The figure below depicts the transition from the deep structure to the surface one:

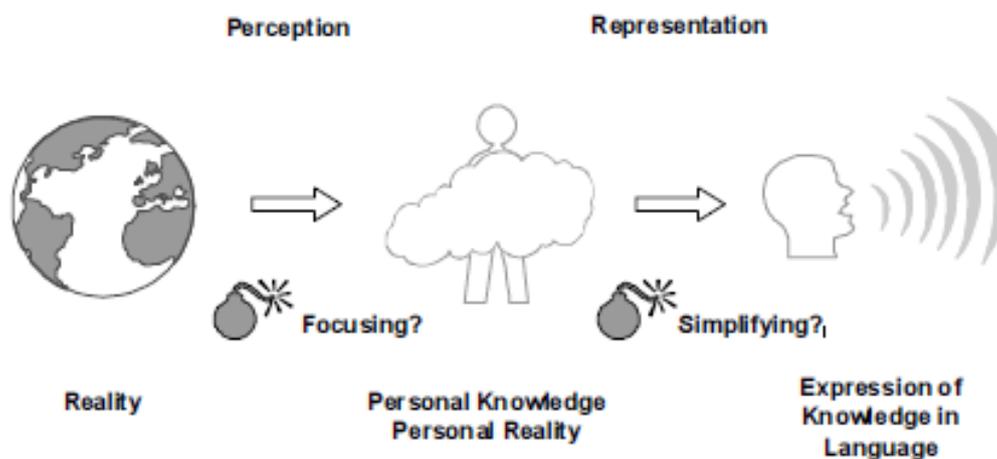


Figure E - Reality, personal knowledge and its expression in language (Goetz & Rupp, 2003)

1.3.9.2. Metaphors

Dilts (2007) explains that the metaphor is the figure of speech used by an individual to speak of something as if it is something else. Metaphors are useful when trying to convey a message, due to being memorable and also due to the fact that they may contain emotions as well as lessons (Furduescu, 2016). An effective metaphor may take the audience through a myriad of emotions, from humor to sorrow (Molden, 2007). The Oxford Dictionary defines metaphor as “a thing regarded as representative or symbolic of something else” (Oxford Dictionaries). The metaphor is useful to determine one’s individual reality, as he/she gives his/her own interpretation of the reality. They are based on the idea of comparison, and with its help, they try to make information as accessible as possible (O’Connor, 2012). The main advantage of a metaphor, according to Furduescu (2016), is that it can easily overcome the barriers of consciousness and access the deep structure, which will ease the process of finding solutions for arising problems. These solutions can be based on knowledge, skills and experiences that the individual already possesses, but cannot elicit. Iosif (2013) argues that the key aspect of the metaphors is that they facilitate communication. When they reach the deep structures, the metaphors act as mirrors for the individual’s places of attention, values, beliefs, assumptions. Metaphors can be: words, expressions and stories. Metaphors help people become more flexible and thusly optimize the communication process (Iosif, 2013).

Examples of effective uses of metaphors are (Barton, 2011):

- **Usage of metaphor over direct criticism. (Instead of telling someone directly they are over-reacting, try something like “Wow that seems like a gourmet reaction to a drive-through”). Through the metaphor, the listener can more easily understand and accept the criticism,**

without feeling offended because it is delivered by association, comparison and resemblance, rather than straightforwardness).

- **State questionable characteristics in the most positive way possible if addressing the possessor of said characteristics. (“You have a highly developed ability to take a position and stand firm on things.”) Because all behaviors can be useful in at least one situation, if we reframe it effectively enough, even a stubborn person, such as the one in this case, can accept and understand more easily the criticism, while, at the same time, believing an acknowledged upside).**

1.3.9.3. Milton Model

This model is the inverted image of a meta model, as it uses an ambiguous, nonspecific language (Dilts, 2007). Inspired on Milton Erickson’s techniques, the Milton Model uses language in artfully vague ways so the individual can take the meaning that is most appropriate for them. For this to happen, people have to be induced in trance states, which will enable them to overcome problems and discover their resources (O’Connor & Seymour, 2011). It acts on the unconscious mind, where information is abstract, symbolic and works in metaphors. Since behaviors are driven by our unconscious mind, more significant changes can be achieved if there is any sort of communication established with it, more than conscious dialogue (Wake, 2010).

The language structure of the Milton model is based on hypnotic language elements. The hypnotic language stimulates the conscious as well as the unconscious of a person, it helps overcome conscious barriers and it avoids the appearance of new resistances in the communication process (Knight, 2007).

1.3.9.4. 3M method’s Aim:

Finally, the meta model, the metaphors and the Milton model all in conjunction result on (Furduescu, 2016):

- **Improving the communication process;**
- **Eliminating as many ambiguous elements as possible in the communication process; and**
- **Directing the communication process to a certain reference, for achieving the objective.**

The 3M model is responsible for improving and optimizing the communicational process, as it reduces the use of ambiguous element. It classifies the references depending on their importance and priority.

1.3.10. Modelling

Modeling can be simply defined as the process of replicating human excellence. Explanations of *why* some people excel more than others usually cite inborn talent (O'Connor & Seymour, 2011). In this regard, Wake (2010) explains that modelling assumes that a given specific behavior, ability or skill that can be performed by a person, can be replicated by others in half the time it took for the original owner of such. The basic notion is that all people may achieve excellence, provided that they maintain the indispensable values, beliefs, attitudes needed to attain the said behavior (Wake, 2010). By using the mind and body in the same way as a peak performer, NLP users may instantly enhance the quality of the actions and results. NLP models what is possible (O'Connor & Seymour, 2011). Modelling is very effective in business environments, argues Cremone (2016). One can model the actions of someone who closes deals successfully, who is confident, smart and always motivated to do business. The main aspects that individuals should look for when modelling are watching the person executing the desired behavior, so as to learn with their body language, tone of voice as they speak, their body posture, among other things. Modeling has to be a constant process and turn into a habit and not only done once, in order to create its effects (Cremone, 2016).

There are three phases in the full modeling process, as O'Connor and Seymour (2011) explain.

1. The first phase is characterized with the individual being along with the model to observe the desired behaviors. The focus will be on *what* the person is doing (behavior and physiology). This can be achieved from direct observation. The attention must also be on *how* he does it (internal thinking strategies) and *why* he does it (the supporting beliefs and assumptions). The *how* and *why* questions are answered by asking questions.
2. Afterwards, the NLP user will shift into the second phase. In this stage, the user will systematically remove elements of the model's behavior to see what makes a difference. By leaving certain elements out that do not make a difference in the end result, makes them unnecessary. Conversely, if the removed element impedes the behavior from being successful, it means it is essential. This phase is very important because it is where the user starts refining the model and understanding it consciously. This process is the complete opposite of traditional learning patterns, where the learners add pieces and elements incrementally. Using this method, one cannot perceive what is and what isn't essential. Modeling, which is the basis of accelerated learning, retrieves all the elements, and then subtracts to find what is needed.

3. The final step is to design a way to teach the skill to others.

O'Connor and Seymour (2011) do not claim that one can simply become another 'Einstein, Beethoven, or Edison'. To do so, one would have to exhibit the exact same thinking patterns, physiology and personal history. However, NLP may help an individual develop thought patterns similar to an Einstein, and apply them, in his life, if he chooses to. This will bring him closer to the fulfillment of his potential.

Wake (2010) concludes arguing that modelling's effects on an individual are as follows:

- **Reduce training time;**
- **Reach a higher level of expertise;**
- **Pre-select – hire those with talent and innate ability; and**
- **Self-improvement and then installation of behavior in self.**

1.4. NLP: Science or Pseudoscience?

Since its creation, NLP has dealt with skepticism from various researchers due to the lack of empirical evidence and incorrect naming of concepts. Roderique-Davies (2009) argues that our thinking patterns should be defined as 'cognition' not 'neuro'. The use of the latter word is deceiving since NLP offers no explanation at a neuronal level. This already contributes negatively to the credibility of the NLP.

Bandler and Grinder (1979), on their book *Frogs into Princes*, which is one of the first pieces on the subject, state that they are not psychologists, theologians or theoreticians; that they have no idea about the real nature of things; and are not particularly interested in what's true. Their aim is to describe something that is useful. No empirical evidence for their NLP claims is presented and also no explicit interest on showing it is noted. Indeed, they go as far as to write in their book the following:

"IF WE HAPPEN TO MENTION SOMETHING THAT YOU KNOW FROM A SCIENTIFIC STUDY, OR FROM STATISTICS, IS INACCURATE, REALIZE THAT A DIFFERENT LEVEL OF EXPERIENCE IS BEING OFFERED YOU HERE. WE'RE NOT OFFERING YOU SOMETHING THAT'S TRUE, JUST THINGS THAT ARE USEFUL." (BANDLER & GRINDER, 1979, P.7)

Dilts et al. (1980) also comment that NLP 'makes no commitment to theory, but rather has the status of a model':

"A THEORY IS TAXED WITH THE TASK OF FINDING A JUSTIFICATION OF WHY VARIOUS MODELS SEEM TO FIT REALITY. WE ARE MODELERS AND WE ASK THAT YOU EVALUATE THIS WORK AS A MODEL, IGNORING WHETHER IT IS TRUE OR FALSE,

CORRECT OR INCORRECT, AESTHETICALLY PLEASING OR NOT, IN FAVOR OF DISCOVERING WHETHER IT WORKS OR NOT, WHETHER IT IS USEFUL OR NOT.” (DILTS ET AL., 1980, P.7)

Barton (2011) argues that there is a great deal of criticism on NLP just as there is a great deal of advocacy for it. The confusion is generally originated from the fact that there are literally hundreds of processes taught in various institutes. These methods are not taught in the same manner or even described in the same way in various documents. Nowhere in their book do Bandler and Grinder claim that eye movements can be used to detect deceit, in fact, they do not discuss deception at all.

Mann et al. (2012) conducted an experiment on a group of 204 persons to figure out whether the eyes of the individuals were moving in the directions that were postulated by the EAC model when they were recalling memories. The main aspect of the experiment was to perceive through eye movement whether the person was lying or telling the truth. They found weak evidence for a relationship between such eye movements and deception. When being asked to lie to the researchers, 6.5% of the people showed ‘deceptive’ eye movements, whereas only 1.5% showed ‘truthful’ eye movement when answering with honesty. However, there seems to exist a misinterpretation of concepts. Several practitioners have picked up the words ‘construction’ and ‘remembering’ and interpreted them as ‘dishonesty’ and ‘honesty’, respectively (Gordon, Fleisher, & Weinberg, 2002; Hess, 1997; Rhoads & Solomon, 1987). Buckner et al. (1987) found support for the visual and auditory portions of the model, but the kinesthetic portion was not supported, as far as EAC are concerned. Additionally, Wertheim, Habib, and Cumming (1986) did find some support for the hypothesis that eye movements relate to processing imagery.

Methodological errors also taint the reputation of NLP in the scientific community. Einspruch and Forman (1985) conducted a literature research on NLP and came to an astonishing conclusion. 39 empirical studies (almost all of them concerning either the identification of primary representational systems or the effects of matching or mismatching primary representational systems) presented the following methodological errors:

- **lack of understanding of concepts of pattern recognition and inadequate accounting of context;**
- **unfamiliarity with NLP as an approach to therapy;**
- **unfamiliarity with the NLP meta model of linguistic communication;**
- **failure to consider the role of stimulus-response associations;**
- **inadequate interviewer training and definitions of rapport; and**

- **logical mistakes.**

Witkowski (2010), after spending 35 years researching on NLP, came to a 'disappointing' conclusion, in his words. Out of 315 articles on NLP, the author filtered and examined 33 studies. The results are as follows:

- **Nine works support the principles of NLP and its derived hypotheses (27.3%).**
- **Eighteen works are not supportive of NLP's tenets and its derived hypotheses (54.5%).**
- **Six works showed uncertain outcomes (18.2%).**

Witkowski proceeds saying that the numbers clearly indicate that the NLP concept has not been developed on a solid empirical basis. Through examination, one unquestionably sees that less than one-third of the analyzed works shows supportive evidence; more than a half shows non-supportive data, and the remainder draws uncertain conclusions and doubts.

NLP proved to be of little use as a method of enhancing human performance to the US Army (Swets & Bjork, 1990). The army stated that:

"THE CONCLUSION WAS THAT LITTLE IF ANY EVIDENCE EXISTS EITHER TO SUPPORT NLP'S ASSUMPTIONS OR TO INDICATE THAT IT IS EFFECTIVE AS A STRATEGY FOR SOCIAL INFLUENCE." (SWETS & BJORK, 1990, P.90)

These arguments certainly raise some ethical questions. Can we accept a form of treatment that is in actuality devoid of empirical background? Can we accept a form of treatment that may cure people or improve their skills, even if, the techniques proposed have no scientific proof backing them up? Is it ethical to accept a treatment, even if it only works due to the placebo effect? What is more important? The means or the end? In the authors' opinion, the end is the most important, as long as the means are not detrimental to the individuals or the organization.

Research Method and Results

Research Method and Results

2.1. Method: Bibliometric Analysis

In order to explore the literature devoted to NLP within the business spectrum, a bibliographic search was conducted in two of the major databases for scientific records: Scopus and Web of Science (WOS)

The search queries involved the main keyword 'Neuro-linguistic Programming' and different business-related terms. In total we conducted 9 search queries in two databases. There were no time restrictions applied, which means that these are all the articles available since the birth of NLP until the 22nd January, 2018. The terms used in the queries are the following and are sorted by date of search:

- **'Neuro-linguistic Programming' AND 'Coaching' (1);**
- **'Neuro-linguistic Programming' AND 'Organization' (2);**
- **'Neuro-linguistic Programming' AND 'Train*' (3);**
- **'Neuro-linguistic Programming' AND 'Business' (4);**
- **'Neuro-linguistic Programming' AND 'Manage*' (5);**
- **'Neuro-linguistic Programming' AND 'Enterprise' (6);**
- **'Neuro-linguistic Programming' AND 'Market*' (7);**
- **'Neuro-linguistic Programming' AND 'Trad*' (8) (Trade, Trading, Trades);**
- **'Neuro-linguistic Programming' AND 'Human Resources' (9).**

Even though we believe that the terms used are sufficient, we still consider that some valuable articles for this dissertation may have not been discovered. We did not delve into more terms, due to time constraints. Interestingly, despite having set up business-related keywords, we still found papers that do not have any sort of relation with enterprises. To cite examples, we found articles on the field of medicine, education, civil work and psychology, even though the latter is comprehensible. Not every article was accessible to the authors, which was unfortunate, since we found some potentially important papers that could supply us with useful information. Some were unattainable either because they were too old, or simply because we could not afford to purchase them.

The next table shows the results of all the queries made in WOS and Scopus:

Table IV -The detailed list of the number of articles that were displayed using nine different queries.

Search query Number	Number of results in Web of Science	Number of results in Scopus	Total number of results
1	5	6	11
2	3	16	19
3	10	30	40
4	8	13	21
5	13	31	44
6	1	4	5
7	6	10	16
8	8	13	21
9	1	3	4
Total			181

Search queries number 5 and 3 were the ones that displayed more results (44 and 40, respectively), whereas the ones with least papers were 9 and 6 (4 and 5, respectively). By examining the table, we see that Scopus always returns more results than WOS. Ultimately, we can confirm terms such as ‘Management’, ‘Manage’, ‘Managing’, ‘Train’, ‘Training’, ‘Trainer’, among others, are the ones that have more abundance in terms of article number display. Conversely, we can confirm that NLP and ‘Human Resources’ or ‘Enterprise’ spur the least interest, in terms of research.

2.2. Method: Assessing NLP’s implications in an organizational spectrum

Out of these 181 results, we found 52 articles that were potentially relevant for our study and thus were saved for future analysis. Others do not have any connection with what we are researching for (i.e. medicine). Subtracting to that number, we have must also take in account those that were potentially pertinent to the investigation, but were, sadly, unavailable. Some original authors were contacted, in order to attain some of their articles, but we did not receive an answer from them (see Appendix).

Apart from these articles, we also selected additional ones based on experiences conducted using Coaching techniques in an organizational environment. Through some analysis of the various techniques of Coaching, we came to the conclusion that a parallelism could be established between Coaching and NLP, thus allowing us to examine such papers under the NLP point of view.

2.3. Results

2.3.1. Histograms

In order to assess the situation regarding research on NLP over the years until the current time, the authors decided to create two histograms based on the databases of Scopus and WOS. To create the first histogram, we accessed these two databases and input the keywords 'neuro-linguistic programming' OR 'neuro linguistic programming'. With this, we would get the results for virtually all the articles that were related to the field. Sadly, we cannot guarantee that all the articles present in the databases that were linked to NLP were counted, since there is the chance that NLP was mentioned in certain articles using different terminologies. The keyword 'nlp' was not used because it is too vague and can be the result of other abbreviations, other than Neuro-linguistic Programming.

After collecting all the information regarding the year of publication of the articles, we proceeded with the creation of the first histogram. We merged the information from Scopus and Web of Science, and the end result is as follows:

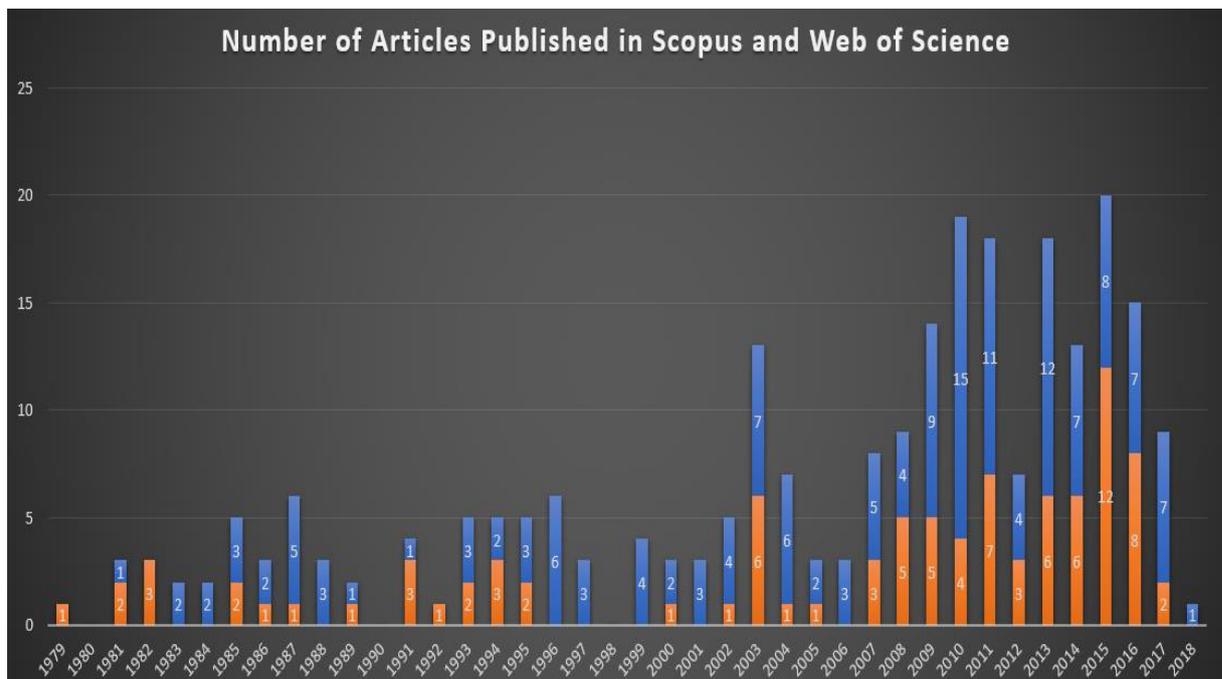


Figure F – The result of the search queries in Scopus and WOS. The result is the total number of articles published over the years using the keywords ‘neuro-linguistic programming’ OR ‘neuro linguistic programming’

The orange bars represent the articles found in WOS, whereas the blue ones belong to Scopus. Altogether, the results displayed range from 1979 to 2018. Scopus displayed 158 articles, while WOS presented 93. The oldest article comes from WOS, which shows that even though NLP as a movement started in the middle of the 1970’s (Bandler & Grinder, 1979), the first paper related to it was published only in the end of that decade on that database. On the next years, there were no more than 6 articles per year were released. It was only until 2003 that NLP research boomed, having 13 papers published. After that, almost all the years registered an increase in numbers with 2015 being the richest year (20 papers). Upon looking into these numbers, we can conclude that the research on this subject is too shallow. Even the most abundant year only scored 20 articles, which is nothing impressive when compared with other fields. This means that the claims encountered on these papers can be easily refuted due to the lack of research in the matter.

The second histogram combined the keyword ‘neuro-linguistic programming’ with ‘coaching’, ‘organization’, ‘train*’, ‘business’, ‘manage’, ‘enterprise’, ‘market*’, ‘trad*’ and ‘human resources’. After taking out the duplicate results, we were now able to create a map of the research on NLP within the business scope. Due to time constraints, it was not possible for us to perform other search queries using different keywords, although we believe that the ones used are able to encompass the most important results. Similar to the first histogram, Scopus shows more results than WOS (72 against 27). This second chart also has its limitations. When we examined the results, we found that some of them had nothing to do with the organizational world, instead they were linked with medicine, education, construction, among others, as mentioned previously. Despite that fact, we decided to include these results to preserve the reliability of the queries’ results. The outcome of the second histogram is as follows:

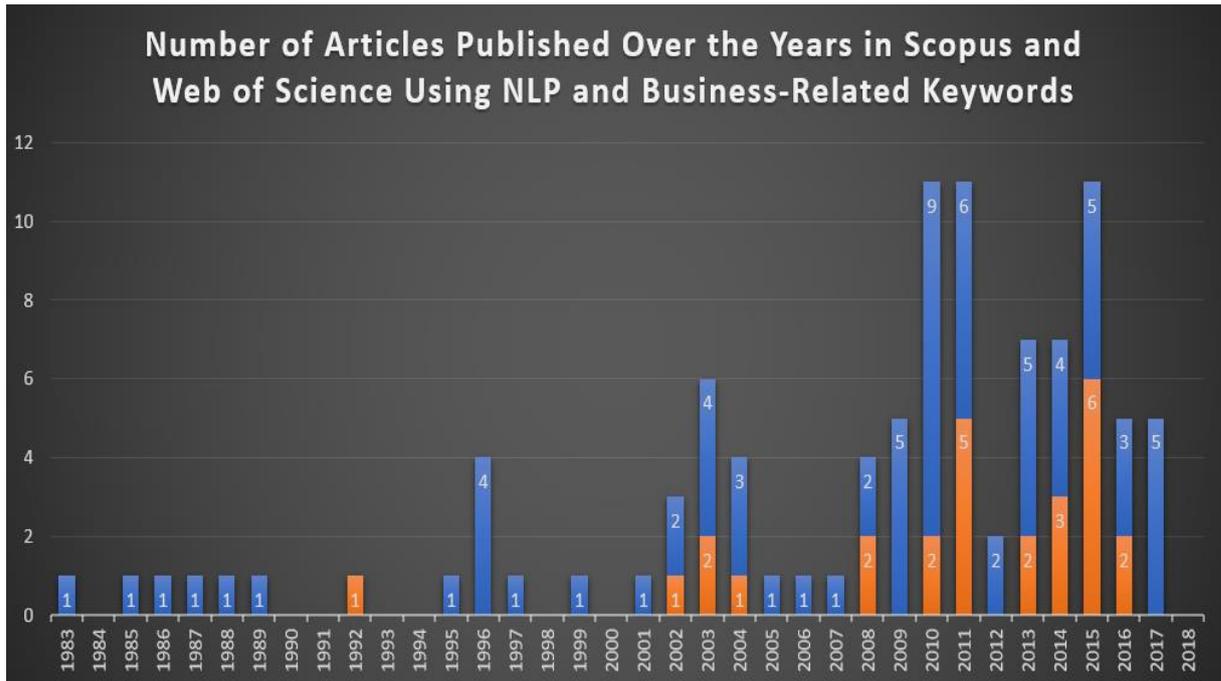


Figure G – The result of the search queries in Scopus and WOS. The result is the total number of articles published over the years using the keywords NLP and Business-related terms.

Again, orange represents results shown in WOS, while the blue ones are part of Scopus. We see that the first attempt at connecting NLP and organizations was made in 1983, and that only 5 more articles were released in the following 9 years. The first article in WOS that connects these keywords dates back to 1992. After that, only in 1996 we see a somewhat great increase in paper publication (4), when compared to previous years. Identical to the first chart, 2003 saw the numbers grow drastically. Following that, it was only in 2010 that we saw bigger figures, with 11 articles published (this highest number in one year, along with 2011 and 2015). With that said, we can deduce that 2010 and 2011 were the peak years of research on these fields combined, with a resurgence in 2015. By looking at the statistics, we may assume that NLP and business is expanding, in terms of research and that in the following years we will have more information on the subject, creating more conditions to draw stronger arguments against or in favor of NLP.

2.3.2. Bibliometric Analysis using VOSviewer

In order to determine which are the most relevant topics in NLP, we performed a bibliometric analysis. Bibliometric methods include citation analysis, co-citation analysis, bibliographic coupling, co-author analysis and co-word analysis. These methods use bibliographic data from publication databases to construct structural images of scientific fields (Zupic & Čater, 2015). After deliberation, we chose to perform a co-word analysis of the most used words when researching NLP because it seemed the most

suitable technique to examine this field. This co-word analysis (Callon, Courtial, & Laville, 1991) connects keywords when they appear in the same title, abstract, or keyword list (Zupic, & Čater, 2015).

Co-word analysis (Callon, Courtial, Turner, & Bauin, 1983) is a content analysis technique that uses the words in documents to establish relationships and build a conceptual structure of the domain. The purpose of this method is to find which words frequently co-occur in documents, which means that the concepts behind those words are closely related. It is the only bibliometric method that uses the actual content of the documents to construct a similarity measure, while the others connect documents indirectly through citations or co-authorships. In the end of a co-word analysis a network of themes is produced and their relations are represented in a conceptual space of a field. This semantic map helps to understand its cognitive structure (Börner, Chen, & Boyack, 2003). Co-word analysis can be applied to document titles, keywords, abstracts, or full texts. The unit of analysis is a concept, not a document, author, or journal.

For this dissertation, given its theme, we decided, as we said previously, that the most suitable analysis would be the co-word one. We wanted to find out which topics and words most frequently show up connected to NLP. To do so, we utilized a software designed for that purpose, which is VOSviewer. VOSviewer is a software tool for creating maps based on network data and for visualizing and exploring these maps (van Eck & Waltman, 2009). In order for the reader to better understand our analysis, we present a succinct explanation of the terms used in VOSviewer. The following is a table that explains used in the cluster density visualization analyses. The text was taken and adapted from the VOSviewer user manual:

Table V – An abridged explanation of some of the terms used by VOSviewer

Variable	Explanation	Observations
Item	For example, publications, researchers, or terms.	
Link	That which is between any pair of items. It is a connection or a relation between two items.	
Strength of a link	The strength of a link indicates the number of publications in which two terms occur together.	It is always a positive numerical value. The higher this value, the stronger the link.
Network	A set of items together with the links between the items.	
Cluster	Groups of items.	Clusters do not necessarily encompass all items in a map. Thus, there may be situations where certain items do not belong to any cluster. Clusters are labeled using cluster numbers.

The next step is to import the data of the queries made on the Scopus and WOS databases and inputting it onto this software. The keywords used in this query were "Neuro-linguistic Programming" OR 'Neuro Linguistic Programming'. In regards to the Scopus query, 158 results were shown. WOS displayed 93.

Afterwards, we started creating the semantic map by instructing the program to analyze the titles, abstracts and keyword co-occurrences in the papers that appeared on the search query. Semantic maps (i.e., co-word analyses) can be used to represent the cognitive structure of a field (Zupic & Čater, 2015). The full bodies of texts were not examined, since the software is not capable of analyzing them integrally. As limitations are concerned here, we did not find a way to incorporate the data imported

from Scopus and WOS into one single file, which means that we had to create six separate semantic maps, three for each database. In the end, this may not show the true picture of the state-of-the-art, although it will display six maps that are likely to reflect the approximate reality. Also, we noticed that this software is, occasionally, unable to associate similar words, treating them as different, such as, for example, 'neuro-linguistic programming', 'neuro linguistic programming' and 'nlp'. Since we did not find a way to instruct the software to interpret these words as one of the same kind, we opted to hide the less used of these synonyms on the maps. Their influence is still present, but they are not seen. We chose to view the maps using the cluster density visualization, which means that it will look similar to a heat map to facilitate the comprehension. The 'hottest' terms are the most used, and conversely, the 'coldest' ones are the least utilized. Additionally, the degree of proximity of the terms between themselves indicates the strength of their interconnections. To better understand this visualization method, we use Van Eck and Waltman's explanation that can be found on their paper *Software survey: VOSviewer, a computer program for bibliometric mapping*. Items are indicated by labels when cluster density visualization is selected. The overview of the general structure of a map draws the examiner's attention to the most important areas in a map.

The item density varies depending on the number and weight of the items surrounding it. The larger the number of items and smaller the distances between them and the point of interest indicates high item density. This is also valid for the weights of neighboring items. The higher the weight, the higher will item density be. The cluster density view is particularly useful to get a general idea of how the items organize themselves in clusters and of the way in which clusters of items are interrelated (van Eck & Waltman, 2009).

When arranging the settings, we need to set up term occurrence threshold. This is the minimum amount of times the same word should appear on the analysis to be shown on the map. The following table will demonstrate the selected parameters chosen to build the maps.

Table VI – The parameters used for the creation of the maps on VOSviewer

Database	Basis of the Map	Total Occurrences	Threshold	Results	Observations
<i>Scopus</i>	Keyword	933	10	16	3 results were hidden due to word repetition (neurolinguistic programming; nlp; humans)
<i>Scopus</i>	Title	452	4	9	Threshold is small, otherwise the number of results would be minimal (3). Additionally, 2 results were hidden due to word repetition (neuro; nlp)
<i>Scopus</i>	Abstract	2906	15	20	1 result was hidden due to word repetition (nlp)
<i>Web of Science</i>	Keyword	325	3	8	3 results were hidden due to word repetition (neuro linguistic programming; nlp; neuro-linguistic programming [nlp])
<i>Web of Science</i>	Title	286	4	5	Threshold is small, otherwise the number of results would be minimal (3). Additionally, 2 results were hidden due to word repetition (neuro linguistic; nlp)
<i>Web of Science</i>	Abstract	1845	10	18	1 result was hidden due to word repetition (nlp)

2.3.2.1. Interpretations of the maps

According to Zupic and Čater (2015), there are three strategies that we can employ to interpret bibliometric analyses. We can focus on structure, focus on dynamics, and focus on a narrow research question. When focusing on structure, the aim is to examine the relationships between structural elements (groups of publications, authors, concepts). Focus on dynamics means that a development of a research field will be tracked throughout time. The last strategy is to focus on a narrow research question, such as, “is research stream X over-reliant on theoretical perspective Y?”. Typically, these papers will have a small empirical bibliometric part that is used to illustrate or prove authors’ claims and extensive discussion of the relation of these claims with existing literature.

We came to the conclusion that the most suitable type of focus is the structural one. We want to interpret the state-of-the-art of the concepts related to the field of NLP.

The six maps created by VOSviewer are the following:

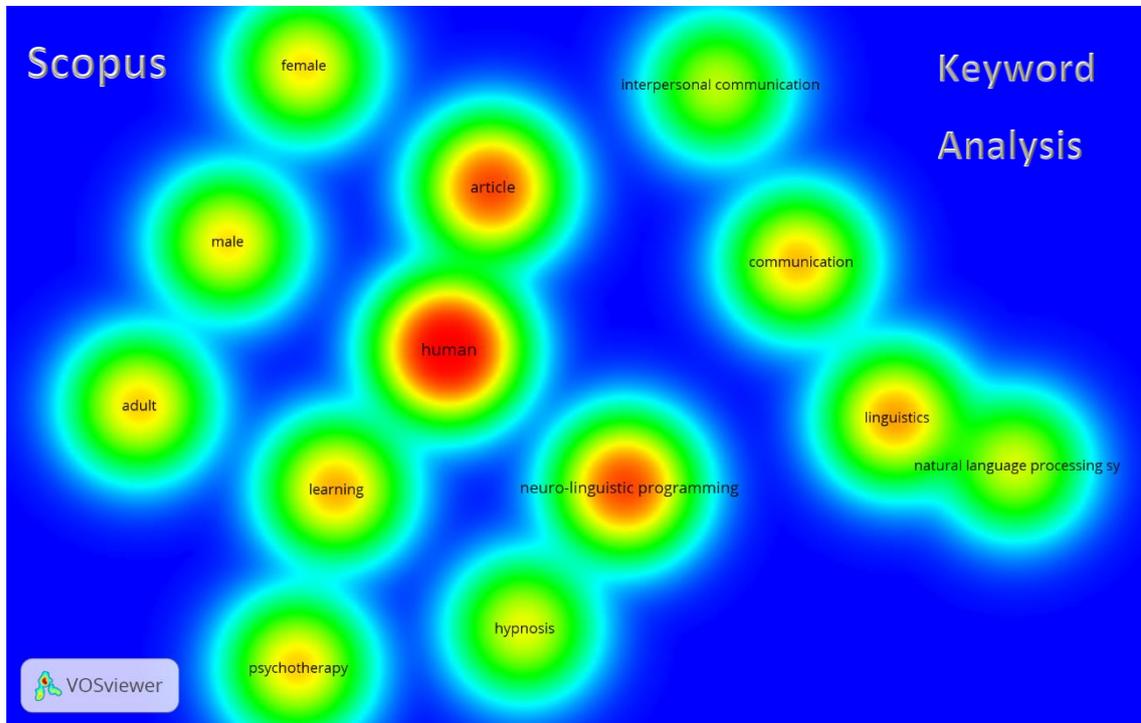


Figure H – The keyword analysis made via Scopus

The densest item of this map is 'human' with 43 occurrences and a total link strength of 144. 'Article' and 'neuro-linguistic programming' share the same number of occurrences (27). For now, we can only conclude that the field of neuro-linguistic programming is focused on humans and that research in the form of articles is strongly present on this subject. We have to delve in a little further and analyze the least frequent terms to draw starker conclusions. Immediately we find a cluster where 'hypnosis', 'psychotherapy' and 'learning' are near each other, and closely connected to 'neuro-linguistic programming'. With it, we can assume that a large number of articles in this field is related to hypnotizing humans, conducting psychotherapies and making them learn. These 'humans' are adult males and females, as we can see if we look to the left hand of the map. Finally, on the right side, we observe that 'communication', 'interpersonal communication', 'linguistics' and 'natural language processing systems' are closely linked and indicate that NLP is moderately related to these keywords when articles on this field of study are published. As a final note, 3 results were hidden due to word repetition (neurolinguistic programming; nlp; humans]).

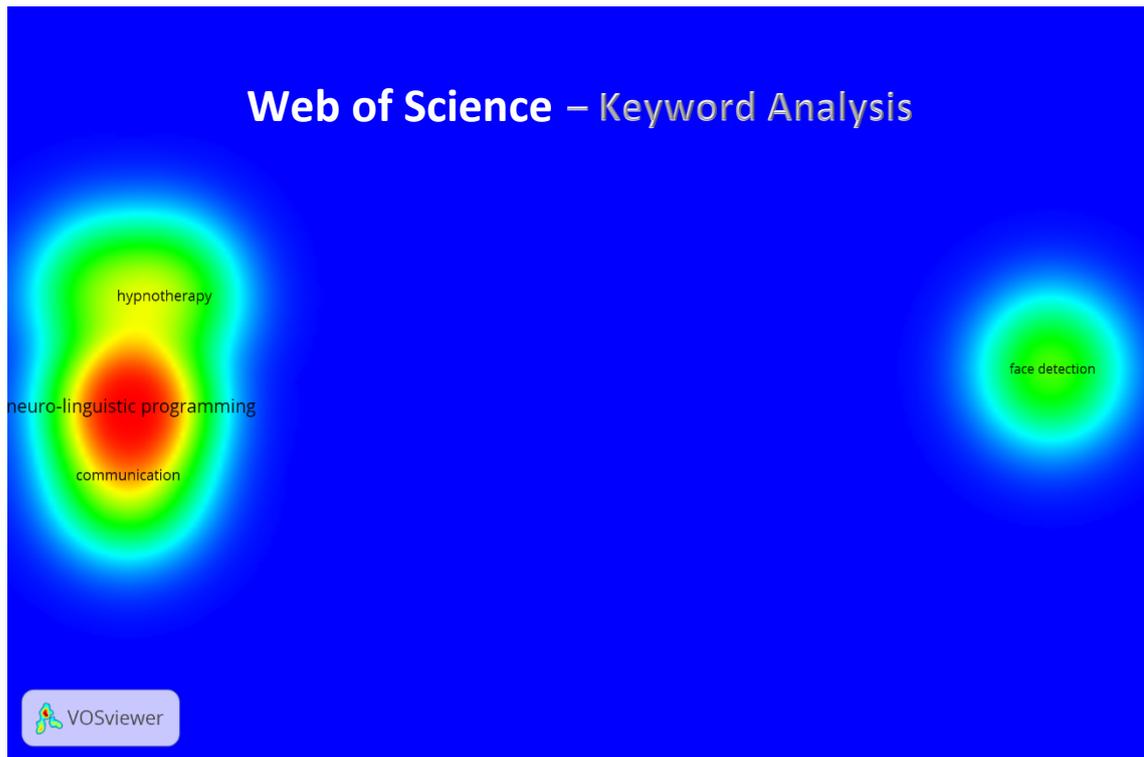


Figure 1 – The keyword analysis made via WOS

Sadly, as it will also be noted in the next title analysis of WOS, the number of results shown on the map is too short. The main keyword here is 'neuro-linguistic programming' (17 occurrences) and is closely connected to 'communication' and 'hypnotherapy', showing, once again, that hypnosis and communication are connected to the research on NLP. Although not visible on the map due to the shortage of occurrences, using the software we discover that the keyword 'management' is near 'hypnotherapy'. Perhaps hypnotherapy as a NLP technique is being used in a managerial context. Lastly, 'face detection' appears on the far right, indicating that it is not strongly connected to the other terms. Possibly this result showed up because it is related to the EAC technique that we discussed on the last chapter. As an observation, we set the threshold to 3, otherwise the number of results with a limit of 5 occurrences would be minimal (3). Additionally, 2 results were hidden due to word repetition (neuro; nlp).

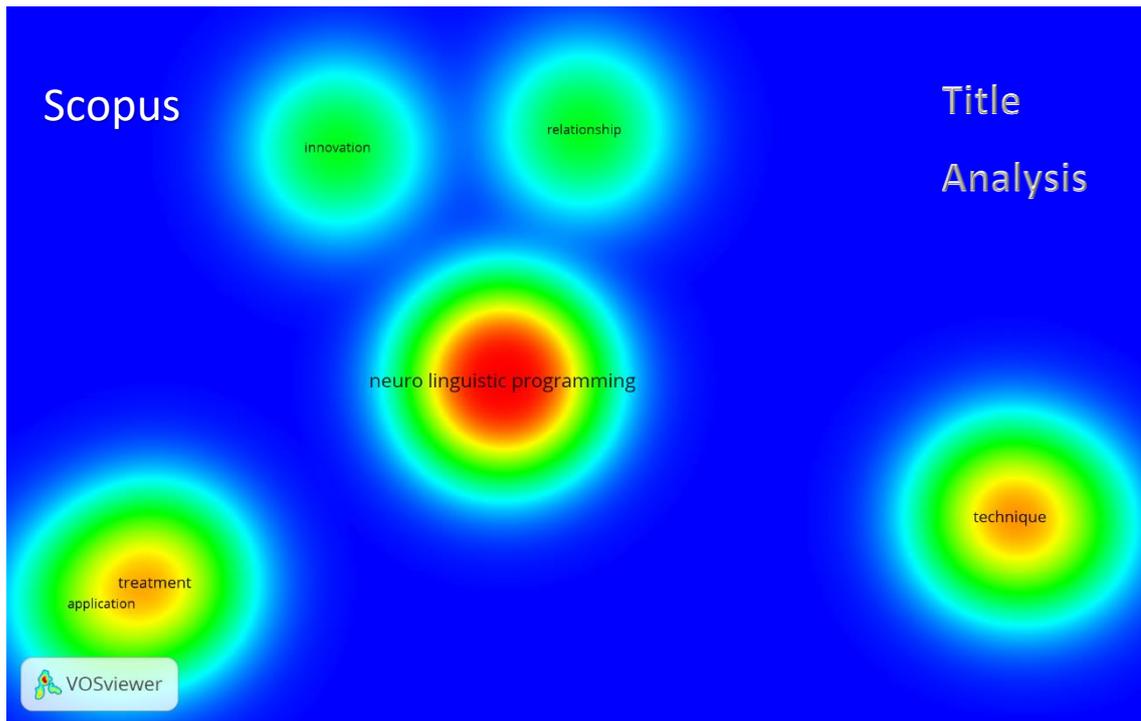


Figure J – The title analysis of the articles published on Scopus

The titles analyzed show that they are reasonably connected to the main term – ‘neuro linguistic programming’ – and organize themselves into clusters (‘treatment’ and ‘application; ‘innovation’ and ‘relationship’ and finally, ‘technique’ and ‘student’ [although this one is invisible on the map, but not on the software’s report]). Thus, we can deduce that along with ‘neuro linguistic programming’, we can find a reasonable number of articles that also deal with treatments, application of techniques, relationships and are also concerned with innovation. Similar to other maps that showed a small number of results, we decided to set the threshold to a small digit (4). This resulted in 9 items, of which, 2 results were hidden due to word repetition (neuro; nlp).

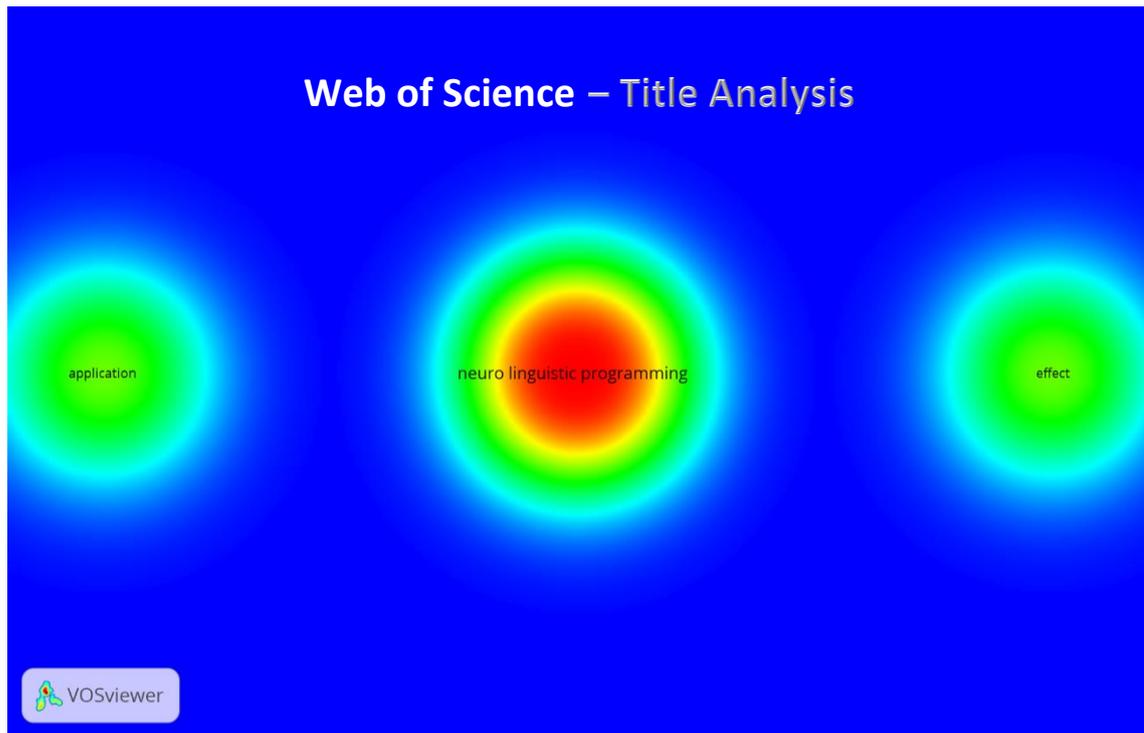


Figure K – The title analysis of the articles published on WOS

The following is the least populated map of the six, which shows that not too many terms co-occur. The threshold set was 4, which corresponded to 5 results. Also, 2 results were hidden due to word repetition (neuro linguistic; nlp). Alongside the main term – neuro linguistic programming – we find the words effect and application. Using only this information, we conclude, although without a high degree of certainty, that the titles published in this database involving NLP are concerned with its application and effects.

The next two maps will be more crowded, compared to the first four ones. This happens because, naturally, abstracts have many more words than titles or keywords of the papers. However, this comes with a disadvantage. When analyzing this sort of maps, we should use caution, as these terms are taken without knowing its context. As an example, we can have two sentences using almost the same words, but with completely opposite meanings: 'NLP is a valid form of psychological treatment' and 'NLP does not serve its purpose as a kind of mental treatment'. In both these sentences, we have the word 'treatment, however with two distinct meanings. The first one claims that NLP can be used to treat people, whereas the second one clearly discredits it. With this in mind, when analyzing these abstract maps, the reader should bear in mind that the terms that appear are solely related to NLP, and do not indicate any other type of connection with it, be it positive or negative.

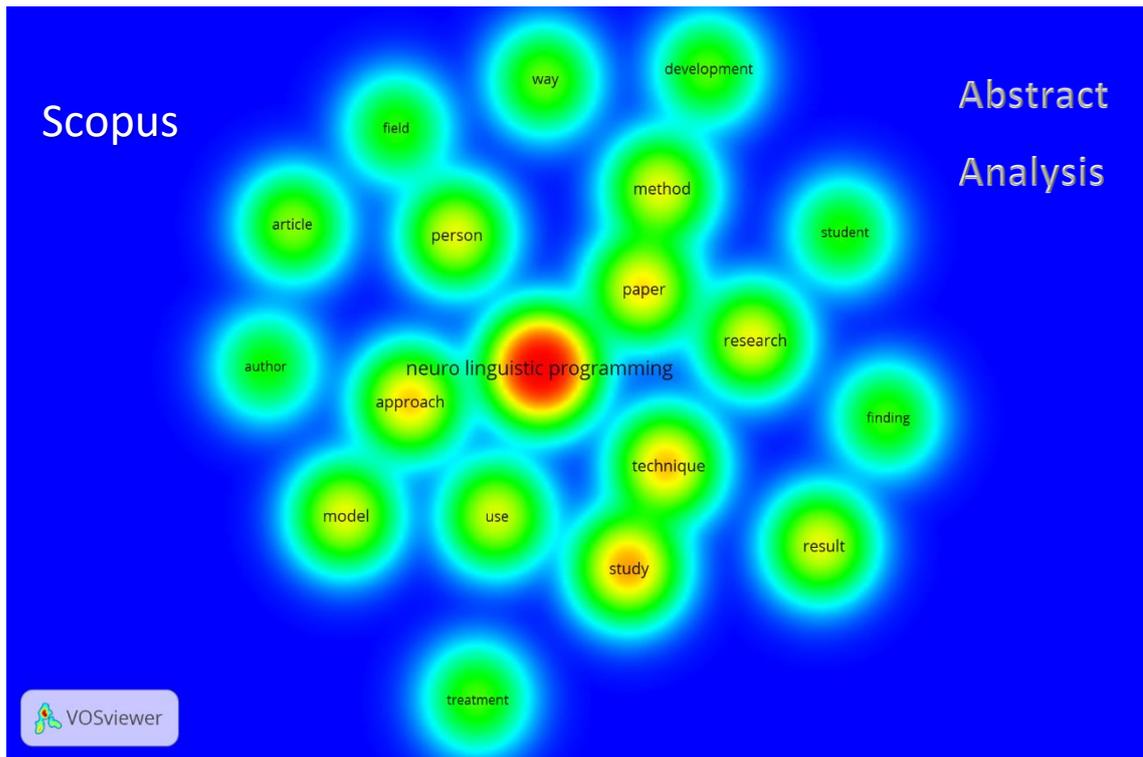


Figure L – The abstract analysis of the articles published on Scopus

With 2906 results, we managed to set a higher threshold (15 occurrences), which resulted in 15 terms being shown. One of those, – ‘nlp’ – was hidden, since ‘neuro linguistic programming’ was a more frequent word out of the two. Like most of the other maps, ‘neuro linguistic programming’ is the centerpiece. This term scored 123 occurrences, while the other two more repeated words were ‘study’ (54) and ‘technique’ (48). Starting off with the closest terms to ‘neuro linguistic programming’, we find ‘paper’, ‘research’ and ‘method’. This is a clear indicator that NLP is still a field under scrutiny and scientific examination. To the left of the main word, we get ‘approach’ and ‘model’. From that, we may conclude that the majority of the articles on NLP discusses its approaches and utilized models, such as the ones that we will briefly describe on a later chapter. ‘Person’ is a term that showed up, somewhat, isolated, but being also one of the most utilized terms (37). NLP is a field where the ‘person’ is studied and where ways of improving it are devised and analyzed. Interestingly, we have the word ‘treatment’ on the outer part of the map, showing that NLP as a treatment is less talked about than, for instance, ‘development’. This is interesting due to the fact that many of the articles that were a result of our queries were related to medicine, even when the keywords used were connected to a business context.

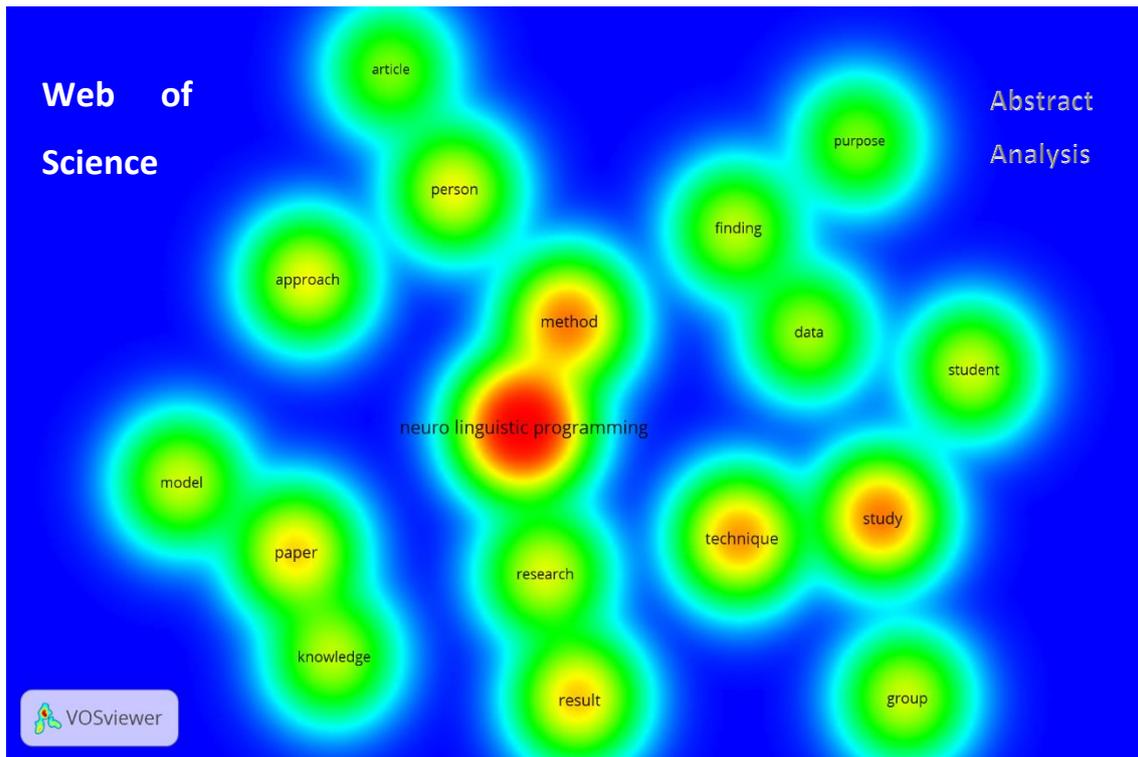


Figure M – The abstract analysis of the articles published on WOS

Finally, we have the abstract map of WOS. Out of 1845 terms, 18 met the threshold of 10 occurrences. One was hidden, - 'nlp' - for the same reason as it was on the last map. 'neuro linguistic programming' is the most frequent word (55 occurrences) and is closely linked to 'method', 'research' and 'result'. Again, the conclusions we can draw are that NLP is subject to a lot of research and their methods are frequently analyzed. Additionally, techniques and studies go hand to hand together, again, closely related to words as 'group' and 'student'. This goes to show that, possibly, there are a considerable number of students studying its techniques, while involving groups. Similar to other maps, 'paper', 'approach', 'person' and 'model' are words heavily used. Lastly and interestingly, this is the only map where 'knowledge' appears. This is somewhat impressive, since NLP deals mainly with knowledge, as we are going to understand in the next chapter.

2.3.2.2. Final thoughts on the maps

After analyzing the six maps, we come to the conclusion that even though the keywords on the search query were related to business, the results lead to other completely different fields in some cases. Terms such as 'treatment', 'paper', 'study', 'hypnotherapy', 'relationship'. The only ones that we may find a link to the organizational world are 'learning', 'development', 'communication' and 'innovation', but they do not appear as often as the previous words. With all this information, we can conclude that

this field of NLP within the organizational scope is not thoroughly explored due, not only to the lack of relevant terms, but also the presence of medical and academic expressions in search queries related to business.

Discussion of NLP and its implications in the organizational spectrum

Discussion of NLP and its implications in the organizational spectrum

As we shown in the last chapter, little research of NLP's influence and techniques has been applied to the organizational context. That is the main reason for this dissertation to come about. Taking a theoretical approach, we will hypothesize on the application of NLP on three impactful areas inside a business, which are *leadership*, *selling* and *motivation*. The steps taken will be to explain each area and discuss some problems that are often encountered in them. Afterwards, we will suggest the application of the aforementioned techniques and tools to ameliorate or mitigate problems that occur commonly on these three fields.

On this chapter we will make use of the word 'coach'. However, when we utilize it, we will be making reference to the NLP practitioner and not the practitioner of Coaching. It is of our understanding that an NLP professional is also a coach and because of such, we do not see that word as exclusive to the field of Coaching.

Our primary intention was to suggest the employment of NLP techniques on the following business-related fields: negotiations, motivation, sales boosting, leadership skills boosting, training and termination of contracts. In the end, we decided to expand only on motivation, sales boosting and leadership skills boosting, since we perceived these areas as the most impactful for the reader to fathom in regards to the application of the aforementioned techniques and tools. If the opportunity for further investigation arises, the authors intend on exploring these contingencies and possibly others.

3.1. NLP applied to boosting leadership skills

There has been a shift of awareness over the last years concerning the hiring of coaches to ameliorate the skills of leaders in companies (Athanasopoulou & Dopson, 2018). A survey of 140 coaches carried out by Harvard Business Review showed that, just over two decades ago, toxic behaviors of leaders were the only concern coaches addressed. Nowadays, companies hire coaches to develop high-potential performers (Coutu & Kauffman, 2009). These programs include assisting coachees' transition into new roles (Sherpa Consulting, 2014). This phenomenon has affected management education. Personal development and reflection courses are becoming increasingly abundant in MBA curricula and executive education portfolios (Datar, Garvin, & Cullen, 2010; Petriglieri, Wood, & Petriglieri, 2011). In the current day and age, organizations are prioritizing leadership development (McCauley, Kanaga, & Lafferty, 2010). The reason is that skilled leaders are necessary for:

- The effective design and implementation of business strategies (Augier & Teece, 2009);

- Management of followers' attitudes and behaviors (Avolio, Gardner, Walumbwa, Luthans, & May, 2004);
- Regulation of team processes and outcomes (Morgeson, DeRue, & Karam, 2010); and
- Overall organizational performance (Waldman, Ramirez, House, & Puranam, 2001).

A recent UK survey found out that almost 71% of 729 organizations interviewed regularly invested in coaching as a learning and development tool, with 39% offering coaching to directors and senior managers (Chartered Institute of Personnel and Development, 2008). The various coaching programs include individual managers experiencing developmental assignments and participating in various developmental programs (Subramony, Segers, Chadwick, & Shyamsunder, 2018), such as, formal training, mentoring, and action learning acquire a variety of managerial skills (Dragoni, Tesluk, Russell, & Oh, 2009; McCauley, Ruderman, Ohlott, & Morrow, 1994). In business settings, two main streams of research emerged (Pousa & Mathieu, 2014b). The first one focuses on executive coaching, where a top-level executive (normally the CEO, or one of the direct subordinates) is being coached by an external consultant in order to help the individual achieve predetermined goals, improve his or her professional performance and personal satisfaction, and thusly improve the effectiveness of the organization (Joo, 2005; Kilburg, 1996). The other stream of research concerns managerial coaching, also identified as the manager-as-coach model, employee coaching, or simply coaching (C. Pousa & Mathieu, 2014b). In this section, we focus on the former.

3.1.1. Executives and their problems

A study carried out by Gray, Ekinici and Goregaokar (2011) on small and medium-sized enterprises of the United Kingdom (SME) uncovered some problems executives face. For starters, the top-level employees are particularly reluctant to engage in management development (Centre for Excellence in Management and Leadership, 2002; C. Gray & Mabey, 2005; Alison Smith & Whittaker, 1998; Storey & Westhead, 1998; Wong, Marshall, Alderman, & Thwaites, 1997). 82% of managers in large companies (>500 employees) undertake formal development, whereas only 37% of the managers of firms with less than 10 employees resort to such training (Storey, 1994). This means that the majority of managers are more likely to be reactive (to an externally arising need) rather than proactive and developmental (Alison Smith, Whittaker, Loan Clark, & Boocock, 1999), and tactical when it comes to resolving problems that threaten the firm's stability or durability (Patton & Marlow, 2002). For many owner-managers of SMEs, the business is an extension of their self-image and ego (Scott, Roberts, Holroyd, & Sawbridge, 1989) and they do not possess managerial skills nor leadership that are needed to cope with emerging issues, especially when it comes to managing and motivating people (Fuller-

Love, 2006). As companies grow larger, these problems become exacerbated, which results in employers being forced to acquire new skills themselves, train their existing employees or hire professional managers from the outside. However, these SMEs managers suffer from an autocratic style, have short-sighted objectives and do not trust specialized managers (Keasy & Watson, 1993). Another problem is that managers lack skills in rapport building, listening, looking and responding (Milne, 1988). Managers spend more than 60% of their time in one-to-one relationships, which makes these aforementioned skills crucial (Henderson, 1987).

3.1.2.Executive Coaching, what can it do?

Executive coaching (EC) is an intervention which helps executives develop and maintain positive change in their personal development and leadership behavior (Athanasopoulou & Dopson, 2018). The following table illustrates the positive outcomes from EC:

Table VII - Categories of positive outcomes from coaching (Adapted from Athanasopoulou & Dopson, 2018)

A. The coachee
i. Personal development
<ul style="list-style-type: none"> • Overcoming regressive behaviors or experiences; • Reduced stress/anxiety; • EC seen as effective, positive or life changing experience; • Coaching seen as source of support and encouragement; • Increased work and life satisfaction; • Better personal management/self-control; • Improved resilience; • Better time-management; • Improved personal skills/abilities or acquisition of new ones; • Adaptability/flexibility; • Improved ability and quality of goal-setting.
ii. The coachee and the others: behavioral changes in relation to others
<ul style="list-style-type: none"> • Better leadership skills - Better management and development of others;

<ul style="list-style-type: none"> • Coachee perceived by others (seniors and subordinates) as a more effective leader post-coaching; • Better quality of interactions and relationships; • Improved team player and team-building skills; • Better communication skills.
iii. The coachee and his/her work
<ul style="list-style-type: none"> • Work performance/productivity and planning; • Positive impact on psychological variables that affect work performance (e.g. self-awareness, development of authentic leadership qualities); • Improved coachees' understanding, fit, relatedness and commitment to sponsoring organization - Improved agenda setting skills; • Nurturing working environment - Feeling more valued at work; • Better ability to build cross-functional relationships; • Enhanced workplace well-being;
B. The organization
<ul style="list-style-type: none"> • Positive organizational-level outcomes; • Indirect positive organizational effects from increased employee satisfaction, productivity, leadership effectiveness and coaching culture.
C. The coach
<ul style="list-style-type: none"> • Positive perceptions of coach's effectiveness; • Eliciting coachees' commitment to the intervention; • Coach's personal development - Coaches experience of self-actualization and fulfilment; • Obtained new knowledge and improved coach skillset.

3.1.3. What are the dimensions of leadership development?

Subramony et al. (2018) suggest that leaders develop over time along two dimensions: the intrapersonal dimension and the interpersonal dimension. The development of human capital (cognitive, meta-cognitive and behavioral skills, psychological processes, such as identity and self-regulation) (Lord & Hall, 2005) and the role of learning from previous experiences, such as parental modeling (Zacharatos, Barling, & Kelloway, 2000) and previous positions held (Bettin & Kennedy Jr,

1990). The role of personality (Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000) and other deep-seated individual characteristics such as work orientation, mastery orientation, and career growth orientation (Boyce, Zaccaro, & Wisecarver, 2010) may influence leadership development and are related to the intrapersonal dimension. On the other hand, issues related to interpersonal development are linked to one's ability to build relationships with others, such as enhancing a group's social capital and engaging in effective leadership with followers (e.g. Avolio & Gardner, 2005; Galli & Müller-Stewens, 2012).

3.1.4. Employing NLP on leaders

Due to the vastness of techniques at NLP's display, there are no unique ways to conduct therapy on a manager or leader. The following is but one example of a set of techniques that may be applied to a certain leader in order to achieve a transcendent state.

Rich (1998) states that there are three key components of the coaching construct, which are supervisory feedback, role modeling, and the creation of a relationship of trust among the coach and the subordinate. The intervention consists on the coach motivating and encouraging managers to learn, which will in turn help to surface and test assumptions. Richardson (1996) and Whitmore (1985) argue that a coach will employ his/her knowledge and skills to help coachees become aware of their weaknesses and responsibilities, propose changes and solutions, and commit themselves to implementation, through processes of self-discovery and awareness. So, in order to achieve this through NLP the coach may:

- Employ a reframing process, so that the client sees a specific issue or problem in a different light (or, in a different frame). That will create the awareness and will lead to self-discovery of traits and behaviors. In order to do so, firstly, trust should be created. This is achievable by pacing and leading. The coachee must first find which Preferred Representational System is used by the client. This can be discovered through oral clues revealed by the client: 'I feel like I have a huge rock over my head' (kinesthetic); 'I smell the dollars going away (kinesthetic)'; 'that really sounds like bad news (auditory) or 'I see what they're saying about me' (visual). After finding out the client's PRS, the coach should start using words and expressions that resonate with the coachee and lead the interaction. After a while, trust will be built, which will enable a more efficient reframe of mind.

Milne (1988) notes that the client gives all the clues, albeit in a coded way, to the source of the problem and that it is the coach's job to pay attention to them and bring them up to the conversation. This happens because often there are some trust issues between the coach and the coachee, which can explain the lack of clarity of the latter. The coachee will not sit down for the first time with the therapist and say: 'I'm 56 and what I wanted to talk to you about the preparation for my retirement. I know many of the things which I want to be doing, but what's really on my mind is the possibility that, for medical reasons, I may go blind within 18 months...'. In contrast, the coded message might be: 'I'm 56 and what I wanted to talk to you about the preparation for my retirement. I know many of the things which I want to be doing, but over others I feel in a fog ...' (Milne, 1988). Milne explains that it is crucial to pay attention to the first paragraph that opens the client's speech. This is where often the client will hint on something of importance, and then delve into other less personal and painful topics.

- To clarify the real issues of the client, and to find out which areas are really affecting or hindering his/her performance, the coach may resort to the 3M model.
- Firstly, through the meta model, the coach may question the coachee: 'Why do you feel in a fog'; 'What are the things that you want to be doing?' and so on and so forth, until the speech of the client is completely clarified and no omissions are left. As stated earlier, the meta model is a structured series of language patterns that identify how someone is really thinking. This is accomplished through a series of specific questions that will extract the real message from the coachee. From the surface structure, a coach will attempt to decipher the coded message and reach the deep structure, which contains the real essence of the message.
- Secondly, the metaphor phase will take place. After encountering the genuine problem, the NLP practitioner will use words, expressions or stories to elicit desired emotional states, skills or knowledge that the client may possess, but cannot summon. Metaphors have the benefit of improving the communication process and help people become more flexible to changes. The coach can, for example, put issues under another perspective: 'That is but one of your problems. I can't see it being more special than any other ordinary issue that you face and solve every day. It is like

being the tallest midget in the world, there is nothing exceptional to it'. As we stated before, the metaphor has the power of surpassing the conscious mind and being fixated in the unconscious processes of oneself, creating a more effective message.

- The final step of the 3M model is the Milton model. This is the reverse process of the meta model. By acting on the unconscious mind, where information is abstract and symbolic, one can achieve significant changes, when compared to the conscious dialogue. Now, the NLP practitioner induces the coachee in a state of trance (or hypnosis) through the employment of vague expressions and sentences. The goal is to allow individuals to take the meaning that is most suitable and effective for themselves. By doing so, clients will be able to overcome problems and discover their resources.

To further illustrate the vastness of NLP, we explored the empirical study carried out by Tosey *et al.* (2005) to understand what a senior manager who was experiencing an organizational change process could gain from his experience. The approaches were considerably different from the ones that were explained above, which reinforce the idea that NLP has a wide range of tools, making it versatile. The manager of this study underwent three stages of therapy, which were the following:

Change of Identity

The first phase of the NLP coaching process included the use of Robert Dilts's NLP model of neurological levels (Dilts & Epstein, 1995). This model identifies six levels (environment, behavior, capability, belief, identity, and spirit) and it is represented as a hierarchical network. The environment is located at the bottom and the spirit at the top of the totem pole. What this model explains is that if one changes one item on the hierarchy, all the other ones beneath it will likely be affected by the alteration. This means that change at a higher level (i.e. identity) has more far-reaching consequences for the person and this will probably have an impact on the person's beliefs, capabilities, and behaviors (Tosey *et al.*, 2005).

Change of Beliefs: Complex Equivalence and Causality

NLP suggests we all have our own perspective of the world. It is the map with which we guide ourselves. In order to bring significant changes to the map of the world, individuals will necessarily have to have new views of cause and meaning. What this means is that a person will have to reconfigure the causal relations between the parts of their map, so that transformations take place which will ultimately

change the understandings about the world (Tosey *et al.*, 2005). This corresponds also to the belief level in Dilts' model (Dilts & Epstein, 1995).

Paradoxical Thinking

Paradoxical thinking refers to the fact that people's thinking processes may contain a number of implied or actual opposites (i.e. hot and cold) by dilemmas (i.e. 'I don't know whether to do A or B'), by examples of 'either...or...' thinking, and sometimes by double binds (Bateson, 1973; Watzlawick, Beavin, & Jackson, 1967). Paradoxical thinking is reflected in a movement from either-or thinking, where the two poles of a dilemma are seen as in opposition and mutually exclusive, to a capacity to hold apparent opposites in tension and eventually to find creative resolutions to those tensions. In this empirical study, the authors' interviewee showed a great deal of 'either...or...' thinking patterns. (i.e. 'Ed initially either had information and therefore was powerful etc., or he did not and was powerless'). This was reinforced when the coachee stated: 'You know there's a gap, and the gap is widening all the time in terms of people's ... people believing that either you know or you don't know.' Tosey *et al.* (2005) go on by explaining that 'either...or...' thinking and dilemmas can be experienced as frustrating. After the first therapies, the coach will try to reduce the frequency of these thinking patterns, which eventually happened with the interviewee. This allowed the coachee to develop ways of coping with the paradoxes and contradictions that appeared as part of the organization's transitions. Leadership for him after the therapy meant accepting and managing the contradictions in his own position of having information. Additionally, the focus changed from his own world to taking care of others.

In essence, the use of NLP in that specific case study contributed for the widening of the individual's frame or perspective, probably involving a less egotistic, more detached view of a situation (possibly but not necessarily a spiritual perspective), which included (Tosey *et al.*, 2005):

- A change at the level of identity (Dilts's model of neurological levels);
- Alterations also at the belief level, which were represented by changes in what NLP calls *complex equivalence* and *cause-effect* patterns and a shift from being at the effect to being at the cause, or, in other words, being proactive, instead of reactive;
- Evidence of tolerance of paradox, particularly in the change toward integrating or resolving dilemmas, and less use of 'either...or...' thinking.

3.1.5. Conclusions on NLP applied to coaching leaders

Practitioners and scholars have praised the positive consequences of coaching aspects such as job satisfaction, performance, commitment, and employee development (Pousa & Mathieu, 2014b). The main observed benefit of using NLP is the capability of dominating the power of the unconscious mind. The limiting beliefs and unwillingness to challenge them and the resistance to be willing to improve oneself are the strongest barriers for NLP implementation. They can be surpassed by making coachees aware of the hidden powers they possess through the expansion of their cognitive capabilities. This will enable individuals to comprehend the process properly and build abilities and trust among themselves (Singh & Abraham, 2008). In the end, people will feel more valued and respected which will eventually reflect on the development of a more loyal work ethic and will likely encourage them to work harder. Furthermore, more developed people will have better quality job-related competencies, increase their performance rate and achieve higher customer satisfaction (Ellinger, Ellinger, & Keller, 2005). Pousa and Mathieu (2014b) claim that the studies they carried out supported the hypothesis that coaching increases employee performance.

3.2. NLP applied to selling

NLP can be a very useful tool for salespeople, as their clients may show different communicational patterns. Cremone (2016) explains that NLP offers a myriad of insights and skills capable of incorporating the mind, the body and also the emotions of individuals. These insights and skills will allow NLP users communicate effectively with other individuals, which means that they can be also applied to sales, and consequently, to improve one's career. Tosey and Mathison (2009) argue that apart from the pursuit of states of excellence and peak performance, NLP offers simple information on the way people utilize their senses internally to influence the decision-making process, on the fact that, for instance, some individuals are more 'visual' than others and on the importance of matching the other person's body language to create rapport. NLP language patterns and hypnosis can be used to direct people into making more useful decisions in their life, to act in particular ways, and to be motivated to then buy things (Lakhani, 2008). Zarro and Blum (1989) have stated that NLP can be applied to increase success rates of selling over the telephone by counselling coachees how to overcome 'phone phobia', identify visual, auditory and kinesthetic types of 'phone responders', and how to influence clients on the phone by utilizing the Milton model's hypnotic language patterns. Knight (2002) explains that people who achieve good results while selling over the phone usually create an internal visual image of a successful outcome to their call before they initiate the conversations. NLP coaching may impact a salesperson's development, job performance, and customer relationship

development (Deeter-Schmelz, Goebel, & Kennedy, 2008; Deeter-Schmelz, Kennedy, & Goebel, 2002), commitment and motivation (Onyemah, 2009), reduce manipulative and deviant behaviors, such as, lying (Mathieu & Pousa, 2011). The NLP coaching intervention for salespeople is characterized by high-quality exchanges between the practitioner and the salesperson, in which the former will elicit the latter's awareness of potential areas of improvement by asking questions and counselling (Pousa, 2012; Pousa & Mathieu, 2014a; Richardson, 1996). These exchanges occur in a conversational manner and the objective is to explore problems and encounter potential solutions. The seller will play the most important role, as he/she will actively provide her/his own diagnosis and ideas, and ultimately the potential solutions that he/she could implement in the future. Where this has a positive influence is in the commitment of the salesperson to the agreed-upon solution because it was not imposed by the NLP practitioner, but instead, was proposed by himself/herself. The seller will, additionally gain a more attentive mindset, which will allow to quickly identify the right situations to implement the suitable solutions (Pousa, Mathieu, & Trépanier, 2017). Pousa, Mathieu and Trépanier (2017) add that the fact that the seller is better prepared to face problematic situations will translate into him/her becoming more effective at work, and consequently, capable of achieving greater results.

3.2.1. Rapport building, matching and pacing applied to selling

Rapport building with clients is the first step to effectively apply NLP techniques. When creating a solid rapport, the client's unconscious mind will be more likely to uncritically accept suggestions offered to it (Wake, 2010). Matching and pacing will help build that rapport. The practitioner will match where the coachee is currently situated, in terms of emotional states, problems, questions or doubts and will work alongside him/her to develop a process of responsiveness based on trust. NLP's pacing process includes the matching of physiology, voice qualities and key words (Wake, 2011). Following on what was stated previously, everyone has a PRS, with which they envision the world. In order to establish a connection with the clients, the seller must match the kind of PRS of the clients, to gain an advantage. If the client uses a predominantly visual representational system, the NLP-trained seller will change his/her own messages to visual ones, in order to resonate more effectively with the buyer. The same would be valid for the auditory and kinesthetic cases. The salesperson will have to match his/her own selling strategy with the clients' buying strategy (Cremone, 2016). Active listening is a core element to perform this successfully, as it was explained in the PRS sub-chapter.

Pacing can also be used within companies to form some questions with the objective of reaching desirable outcomes. This will pace the organization or sales department by clearly identifying needs crucial to attaining the desired goals (Wake, 2011 (adapted)):

- What current problems or challenges affect our organization?
- How can our products/services be different?
- How will the clients know that our products/services are different?
- What will they see, hear and feel?
- What can we lose or benefit from if we meet the criteria?
- Is the selling goal or outcome realistic?
- What resources does the organization/sales department might be need to achieve the goal?
- Who can we model that has already achieved this goal?
- Is it possible to model from them?
- What are the first steps in achieving the goal?
- What is the last step?

3.2.2. Anchoring technique applied to selling

Following up on what was explained in the anchoring sub-chapter, we commented, using the words of O'Connor and Seymour (2011), that emotional states exert a strong influence on people's behaviors and thought processes, whether they are positive or negative. These states can be elicited by the use of a trigger, or an anchor, as it is called in the NLP terminology. In organizations, NLP is crucial to the adoption of more efficient behaviors, policies, procedures and requirements. This is done through the use of anchors (Pollitt, 2010). On a group experience designed to analyze the fluctuations of the stress levels of employees, Rao and Kulkarni (2010) resorted to the anchoring technique. The subjects were instructed perform a mental regression to a time when they had accepted some responsibilities and were successful doing so. When that was achieved, they anchored that emotional state. The end result of that NLP intervention was that the reservations of the employees in regards to accepting more responsibilities within the company were mitigated and that the coachees were ready to accept more responsibility.

Anchoring can be done onto the salesperson, or also onto the clients. In order to successfully apply anchors when selling, one should create very positive and pleasant associations to the products or services that are being sold, so as to allure potential clients. On the other hand, when marketing, the seller's strategy should be one of creating anchors that elicit desired emotional states in the client's mind (Cremone, 2016).

3.2.3. Reframing technique applied to selling

By reframing, new interpretations of existing information arise (Dilts *et al.*, 1980). The basic premise is that any given information, be it about someone's personal traits, or a brand is not good or bad on its own. In fact, every information or attribute can be useful in its specific context (O'Connor & Seymour, 2011). Reframing provides clients with a different perspective on information in their lives by assuming

that each situation has multiple meanings. A salesperson must use the concept of reframing to look through different perspectives, deciding which one leads more efficiently towards the pre-determined goals and persuade his/her clients into doing so, as well (Yousaf, Chaudhry, & Haider, 2009).

Cremone (2016) suggests that when salespeople are pitching their products to potential clients, they should resort to questioning and changing thought patterns. When questioning, the salesperson will issue a set of specific questions, for example, to find out what it is that they are not getting from the products and services they are currently using. The aim is to lead customers to the product or service that is being sold, while convincing clients that the flaws that they are currently experiencing will be suppressed once they purchase the offered goods. Allied with that is the changing of the thought patterns of customers, in order to achieve goals. The salesforce can, for instance, reframe the client's thoughts by asking what will they lose by trying something good, in case clients show signs of hesitance. Here the emphasis shifts from: 'Should I try this unknown good?' to 'What will I lose if I try it?'. In the case that the problem is the price, the NLP practitioner can offer the client the perspective of how much they can benefit from the value of their money.

O'Connor and Seymour (2011) continue by arguing that advertisements are instant product/service frames: 'Drinking this coffee means that you belong to the elite', 'using this deodorant means you will get more peer attention', 'by eating this bread it means that you are responsible with your diet'. For instance, Volkswagen, known for its German origin, once aired a TV advertisement that began by exaggerating the stereotypical stiffness of Germans. It showed German engineers attempting to dance, stating that 'Germans are stiff'. Afterwards, they reframed the information with the question: 'But who wants a shaky car?' With that, they took the initially negative attribute 'stiffness' and changed the perception of it by giving it a positive meaning, because it evoked associations of engineers working thoroughly without joking about quality (Neudecker et al., 2014).

Even with Dilts' neurological levels, salespeople can use the reframing technique. As Wake (2011) argues, some individuals will purchase an item at behavioral level, whereas others will buy the same product/service at identity level. Let us take the example of cars. For some, a car is a functional item because it enables them to move from point A to point B, while saving time and in an efficient manner. For others a car is a symbol of wealth or societal status and may indicate something about the person's identity. The task of the salesperson is to identify where the product/service is located in the client's mind, in terms of the neurological levels, and ultimately selling it in accordance to the level the customer views the product/service in.

3.2.4. Example of a preparation of a sales meeting using NLP

In their book, O'Connor and Seymour (2011) give an example of the usage of NLP for the preparation of meetings. The most important resource in any business is its people, which means that the more efficient they are, the more efficient the business will be. Since a business is a team of individuals striving for a common goal, success will depend on how they will cope with four key points:

Goal Setting
Communicating effectively within the group and to the outside world
Reading their environment accurately. Keeping customer needs and responses in mind
Commitment to success: congruence

Table VIII – The four key points to setting up a successful meeting, according to the NLP perspective (O'Connor & Seymour, 2011)

The authors proceed by arguing that in order to successfully participate in a meeting, one must first be in a strong, resourceful state and congruent about the part he/she will have to play. This is done through anchoring. Anchors will aid one reach a desirable emotional and useful state before and during the meeting even if things start to go awry. The room itself may be an anchor. An ideal office is usually filled with encouraging messages of personal power and success. Future pacing, or setting well-formed outcomes, is also a useful technique that can contribute to the creation of desirable situations and feelings. This is done by mentally rehearsing them first. The basic steps to take in order to have successful meetings are:

1. Knowing what your party wants;
2. Know what the other party wants; and
3. Find ways in which both parties can attain what is desired.

If someone is disrupting a meeting or over-reacting, the NLP practitioner can avoid this to continue by performing a reframe on the disruptor's behavior and using a metaphor instead of direct criticism: 'Wow that seems like a gourmet reaction to a drive-through 'or' a Velcro response to a Teflon issue.' Criticism is handled better with metaphors, which have a softer and clearer impact on the person, when compared to direct criticism (Barton, 2011).

O'Connor and Seymour (2011) suggest calibrating for congruence in the midst of a meeting. Calibration may tell you that Person A will light a cigarette when he/she is happy with the outcome. Person B may

always look down when he/she objects. Person C may bite the nails when unhappy. By being constantly aware of how the meeting is progressing, the salesperson is able to avoid unnecessary trouble before it arises.

When closing the meeting, it is recommended the use the backtrack frame, which is to clearly define and get agreement of every party on what actions are to be taken and by whom. In the case of not reaching a full agreement, some concessions should be made, such as: 'If this happened and if X did this and if we convince Y that this is alright, then we proceed?' This is what is called a conditional close. It is also advisable to anchor the agreement with key words and future pace. To remind the participants of what was agreed upon in the meeting.

3.2.5. Conclusions on NLP applied to selling

Intrinsic to sales is the ability to communicate. This comes in many forms, such as, the ability to motivate, persuade, influence, negotiate, convince, lead and empower. NLP proposes the boosting of these capabilities through the usage of its techniques, as well as, other tools that enhance skills like stress management, eliciting of resourceful states, reframing messages and information in general. NLP offers an enormous improvement of efficiency on these aspects through the right selection of PRS, meta programs (thinking styles), giving respect to the perceptions of the world of and unconscious non-verbal signals (Singh & Abraham, 2008).

3.3. NLP applied to motivating the working force

3.3.1. What is motivation and how to trigger it?

Motivation is what stimulates individuals towards goal achievements. These goals can be related to one's education and knowledge acquisition with the aim of enhancing performance (Ankli & Palliam, 2012). The word 'motivation' has its roots in the Latin verb 'movere', which means 'to move' (Kreitner & Kinicki, 1998). It is through motivation that we move from a state of apathy to interest (Iqbal, Yusaf, Munawar, & Naheed, 2012). Motivated people are characterized for experiencing high energy states, abundance of inspiration, dynamism and passion. Conversely, unmotivated people are the complete opposite, lacking strength, will power, encouragement and perseverance (Ryan & Deci, 2000). Within a company, motivation is considered one of the main competitive advantages (Johnson, 2005). Motivation has been a core subject of studies for firms, for quite some time now and this is mainly due to its impact on employee performance and organization bottom line (Elmadag, 2006). Motivated employees have their work satisfaction enhanced, which leads to performance boosts because of the increase in their working commitment, job appreciation, participation and decision-making. This will,

consequently, help the organization in achieving its goals and objectives (Parfyonova, 2009). NLP supports the notion of economic growth through personal growth (Bovbjerg, 2011). Motivation can induce workers to intensify their efforts and manage their work despite any hindrance they may encounter (Shukla, 2012). With that being said, we can infer that motivation exerts a direct influence on employee performance (Uddin, Luva, & Hossain, 2012).

3.3.2. NLP techniques to enhance the motivation levels of the organization's stakeholders

Coaching contributes for the individual's development because it enables the improvement of motivation and skills of employees, which will, in turn, increase their job performance (Stener, 2007). Managerial coaching is the process by which a supervisor (manager or leader) facilitates the learning and development processes of his subordinates through the promoting of beneficial behaviors and activating professional skills (Beattie, 2006). Moreover, managerial coaching represents an effective leadership practice that eases learning processes of the employees with the goal of increasing their effectiveness (Hagen, 2012). Empirical research indicates that this type of coaching has a profound influence not only on an individual level, but also on an organizational level (Agarwal, Angst, & Magni, 2009). Managerial coaching focuses on creating a working environment where supervisors support their subordinates to achieve high performance rates, to adapt to new situations through active guidance, feedback and support (Ratiu et al., 2017). Therefore, managerial coaching is an interaction through which leaders offer constructive feedback to their subordinates, suggestions for the successful completion of their tasks, support throughout difficult situations, and create opportunities for development (Hunt & Weintraub, 2016). Moreover, a managerial coach is capable of communicating and clearly setting expectations, creating and fostering an environment that fosters learning, offering resources for the accomplishment of tasks, enlarging subordinates' perspectives, among others (Beattie, 2006; A. D. Ellinger & Bostrom, 1999). The above-mentioned behaviors are largely consistent with managerial effectiveness (Hamlin, Ellinger, & Beattie, 2006, 2008). Amorose and Anderson-Butcher (2007) highlight the positive relation between coaching sessions and employee motivation. If an employee who is being coached perceives this as a significant investment from the organization to develop their skills, they may react with more enthusiasm and energy towards their work. The coachees appreciate also the personalized attention that is given to them by coaches, which will, in its turn, also motivate them and make them more tolerant to that may have to be made for the company they belong to. By increasing the employee's feeling of recognition and gratitude, coaching increases motivation (Dagley, 2007). The coach should motivate employees by prompting them into taking action and making decisions and by understanding them and strengthening the bond of trust

established between coach and coachee. Nielsen and Nørreklit (2011) emphasize the importance of the coach–coachee relationship, as it affects employee improvement. Kets de Vries (2005) and Finn (2007) add that coaching also enhances self-esteem and confidence, increases managerial skills development and ameliorates negotiation skills. As employees feel more responsible, prouder and freer, their motivation will consequently increase, encouraging them to take more action and increase their efforts to boost performance rates. Coaching also encourages cooperation among employees, which will result in the creation a favorable working environment and productivity increase (Kruzela, 2006).

3.3.3. Instructing managers on how to motivate employees

Managers should entirely fathom the consequences of employee motivation (Achi & Sleilati, 2016). They should stimulate the subordinates to engage in a desired course of action and should know which ‘buttons to push’ to elicit the desired reactions (Anyim, Chidi, & Badejo, 2012). In this respect, (Price, 2001) argues that motivational factors can be defined as a group of stimulators. It is important to notice that motivation is subjective, meaning that it is dependent on each individual’s personality, background, education, culture, experience, age, preferences and taste, making it impossible to create one general motivational procedure that will impact everyone positively (Achi & Sleitati, 2016). Indeed, there are some people who may get motivated by particular factors that appear to be indifferent to others. A manager, must, therefore, recognize each employee’s necessities and preferences in order to satisfy the needs and to generate motivation in accordance. People can never be fully understood due to the fact that they do not expose every inner thought they have. Thus, management should be attentive to the motivational styles of each individual (Adyasha, 2013).

Leadership behaviors, in regards to coaching employees should comprise the following:

- clarifying expectations regarding subordinates’ performance;
- communicating the vision of one’s organization, offering feedback;
- being considerate of subordinates’ needs for development (Charan, Drotter, & Noel, 2001).

Additionally, Charan *et al.* (2001) suggest that the manager should avoid taking corrective actions, and instead encourage subordinates so that they are able to devise ways to overcome their issues autonomously, to exploit their potential, giving them constructive feedback and clearly define professional goals in terms of individual benefits (Charan et al., 2001).

3.3.4. NLP to boost training motivation

Employees have adopted a new attitude to work where they look at work as an opportunity to develop their personal potential and to make progress towards self-actualization. Personal development programs are not only a path to knowledge of the self and to self-realization, but also an individual investment, where the personal and professional interests unite and improve the self (Bovbjerg, 2011). In order to perform a successful training, one must firstly feel the necessary motivation to undertake it. Training motivation is then defined as the “direction, effort, intensity and persistence that trainees apply to learning-oriented activities before, during and after training” (Salas & Cannon-Bowers, 2001, p.479). Research has found that trainees’ motivation to learn and attend training is positively related to skills acquisition, retention and willingness to apply them (Martocchio & Webster, 1992; Quinones, 1995). Coaching motivation can be defined as the receptivity to coaching and commitment to the coaching relationship (Bozer & Jones, 2018). Similar to what happens with training, if a coachee is not motivated to change attitudes and beliefs in order to embrace new knowledge, then the coaching process will fail to have the desired impact. In a training and learning context, learning goal orientation is deemed as an important individual motivational factor that will stimulate the allocation of resources, such as effort and time, to learn, perform and improve. It also facilitates training transfer (Fisher & Ford, 1998; Kanfer, Ackerman, Murtha, Dugdale, & Nelson, 1994). This means that trainees with a learning goal orientation will more likely strive consistently and make sustained efforts to maintain the *statu quo* (Hertenstein, 2001), seek feedback (VandeWalle & Cummings, 1997), possess high self-efficacy (Kozlowski et al., 2001), and perform better in training interventions (Bell & Kozlowski, 2002). A coachee with a strong learning goal orientation will hold a belief that he can change, which will influence that person’s focus on their goal, likelihood to pursuit more challenging goals and persistence towards desired results, regardless of failure. There have been research findings that support the notion that supervisor support has a positive impact on variables like pre-training motivation and skills transfer (Awoniyi, Griego, & Morgan, 2002; Facticeau, Dobbins, Russell, Ladd, & Kudisch, 1995; Gumuseli & Ergin, 2002; Van der Klink, Gielen, & Nauta, 2001). According to Lim (2001), there are three factors that seem to be the most influential when it comes to the transferal of knowledge:

- **discussion between learner and supervisor concerning the implementation of new learning;**
- **positive feedback given by the supervisor; and**
- **the supervisor’s involvement in or familiarity with the training process.**

NLP's pacing technique is a great tool to teach the employees how to set up goals that are feasible, inspirational and consequently, motivational. Similar to what we argued previously, one can pace himself/herself in order to clearly define what the situation is about and what is to be done to successfully conclude the objectives (Wake, 2011):

- What are the current problems or challenges that I am facing in the organization?
- What do I want to be different?
- How will I know that things are different?
- What will I see, hear and feel?
- What might my superiors and colleagues notice?
- Are there any benefits or losses that result from having these needs met?
- Is the goal or outcome realistic?
- What resources might be needed to achieve the goal?
- Do I know of anyone else who has achieved this goal?
- Is it possible to model from them?
- What are the first steps in achieving the goal?
- What is the last step?

When instructing how to pace to employees, modelling comes immediately after. The coach himself can act as a model, which will motivate the subordinates to replicate desirable behaviors themselves. The driving force behind this motivation is the perception by the coachees that the organization is concerned with their development and thus invests in them (Achi & Sleilati, 2016). The coach should be a role model of goal orientation, so that the employees may successfully employ the three phases of the modelling technique that were described in the first chapter.

One of the goals of these techniques is to turn the employees into self-efficient workers. Self-efficacy can be described as the way individuals' self-judgments of efficacy affect either their acquisition of knowledge and skills or execution of actions (Gist & Mitchell, 1992). Research studies show that people who possess higher levels of self-efficacy have stronger beliefs in their task-related capabilities and determined more challenging goals, when compared to those with lower self-efficacy (Bandura, 1986). Occupational self-efficacy is starkly related to job satisfaction, greater attention and efforts to overcome failure and obstacles and also to work-related performance (Judge & Bono, 2001). Self-efficacy is, thusly, a strong indicator of motivation, engagement behavior and performance in regards to learning and development (Bozer & Jones, 2018). Self-efficacy beliefs are stimulated with improvements in competence and self-confidence (Bembenutty, 2016).

In conclusion, by applying the pacing technique, individuals will have a clearer perception of their personal and professional goals and what they have to do to accomplish them. After defining the steps that should be taken, the work force, by the use of modelling, will model their behavior, matching it

to that of the NLP practitioner or model of choice. This will, as it was noted previously, turn employees into more self-efficient people, which will make them more motivated to receive organizational knowledge.

3.3.5. NLP to promote transformational leadership style

Bass (1999) noted that the leadership style has evolved from a transactional one to a transformative one in response to a more complex organizational environment. (Avolio & Bass, 2004; Avolio & Bass, 2002). Transformational leadership is characterized for encouraging employees to engage in the tasks and considering them an active part of the solution of work-related problems (Ratiu et al., 2017). Additionally, transformational leaders are attentive to their subordinate's needs and treat them individually, generating and strengthening feelings of trust and satisfaction (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). An effective NLP manager using this style leads by influencing others to follow, motivating them resolve conflicts among members by using their own terms (Singh & Abraham, 2008). These behaviors motivate subordinates to achieve higher performance levels (Wang, Oh, Courtright, & Colbert, 2011). A transformational leadership style is ideal for co-development projects that are innovation driven, due to its inherent incorporation of inspiration, motivation, and autonomy for organizational members (Stock, Zacharias, & Schnellbaecher, 2017). In fact, transformational leadership aims to stimulate employees to engage in behaviors that transcend their organizational role (Podsakoff et al., 1990).

This leadership style encourages openness by permitting everyone to express their vision, allowing individual development and, consequently, leveraging subordinates' motivation to develop and perform at a higher rate, while being in an environment of multiple and sometimes contradictory interests (Bass, Avolio, Jung, & Berson, 2003; Boerner, Eisenbeiss, & Griesser, 2007; Fang, 2008; Howell & Avolio, 1993; Pieterse, Van Knippenberg, Schippers, & Stam, 2010; Stock, 2006). Thus, the transformational leadership style may have positive effects on the openness to idea generation, performance beyond expectations, independent thinking, and willingness to take on more responsibility (Bass, 1990; Boerner et al., 2007).

In order to motivate a work force composed of people who will most likely have various different ways of perceiving the world, we suggest the undertaking of four steps: determining the PRS of each individual, matching the PRS, using the reframing technique and creating anchors.

By discovering the preferred representational system of each one, the leader will be able to determine how each sees the world, be it visual, auditory or kinesthetic. He/she can conduct meetings to get to

know the workers, so as to find out their PRS. After the PRS is found, the manager will then proceed to the next step which is matching. He will start resorting to expressions, key words and body postures similar to those of the individuals. As explained previously, this is done to create rapport and build trust. Once that is accomplished, a manager may attempt to spur motivation by reframing. The reframing technique will need two factors that were made available in the previous steps. It will need to be congruent with the way people perceive their world. This information is attained by discovering the individual's PRS. Also, trust and bonding are necessary, because it is difficult to change opinions without them, which makes matching crucial. Only then can the reframing process start. By aiding subordinates to see their role in the company as one with more influence and value a manager may trigger feelings of motivation on employees towards work-related issues, like we have noted previously (Bono & Judge, 2004; Zhu, Avolio, & Walumbwa, 2009). Finally, the NLP practitioner will create anchors to elicit the desired behaviors on employees. Anchors can be motivational messages, sounds, a specific song, one distinct sentence, a picture, or even a mug. With anchors, people will be constantly reminded of what was taught during the reframe and thusly have the desired behaviors elicited upon the presence of the anchor.

3.3.6. Conclusion on applying NLP to boost working force motivation

When researching on the topic of motivation, we noticed that it is heavily dependent on the perception of individuals. Employees, in order to engage in activities in a desirable way, will have to have a perception of the task, of the company and of self that is inspiring and engaging. With that being said, NLP offers suitable tools to achieve that end. In our opinion the most effective way to motivate is through reframing, by reshaping the way people look, hear and feel their lives and world. Reframing cannot be accomplished on its own, which makes it dependent on additional techniques and tools such as PRS, matching, pacing and anchoring. These will enable the creation of rapport between NLP practitioner and coachee, the determination of goals and the eliciting of perceptions gained through the process of reframing.

Conclusions

Conclusions

After filtering the results and selecting the relevant papers from Scopus and WOS, our aim was to determine the degree of research on NLP in general, on a first stage, and on a later stage, to evaluate the state of NLP's current investigation in regards to the business aspect. Through the analysis of our histograms we can note that there is not a considerable amount of articles in total (181) between 1979 and 2018, not to mention the ones we saw as relevant for this thesis. In regards to the bibliometric maps, one can see that NLP is closely connected to notions of treatment, methods, hypnosis, communication and techniques, which leads us to the conclusion that business-oriented NLP research is not abundant.

In the last chapter we explore three ways in which NLP can prove to be useful – leadership, negotiations and motivation boosting. Here, we share our opinions on how to ameliorate and improve such skills and contingencies while utilizing NLP's tools and techniques.

When writing on this dissertation, our main goal was to shed some light on the topic of NLP when applied in an organizational context. Leaders, salespeople and overall employees can all benefit from NLP by enhancing their personal and professional skills. This will ultimately have an effect on the organization they work for. NLP possesses a wide range of techniques which can be used in different circumstances, with different people. This makes it versatile and allows NLP practitioners to deliver a tailor-made service that will cater to numerous types of individuals. As we hypothesized, NLP may have the power of transforming leaders who will transform their employees. It may help subordinates muster the motivation to learn, work and enhance job performance. It can aid the sales department and its workers conduct more efficient meetings and teach sellers how to understand the other's ways of thinking. Leaders can learn how to cope with different types of employees and better lead through the goals of the organization.

Since NLP is not a thoroughly explored subject in the field of business, as we can note in the Research Method chapter, we believe that our work is pertinent to the scientific community. Due to that fact, we struggled to find articles that possessed scientific validity. The majority of them did not present any sort of limitations whatsoever. Additionally, upon reading the articles that refuted the statements of the supporters of NLP, we cannot be entirely certain that the techniques we suggest will exert the outcomes that were proposed.

Future studies

In regards to further investigation, we suggest the study of additional contingencies within the company environment, such as, NLP applied to contract negotiation, termination of contracts, communication simplification, among others. Furthermore, we would propose the empirical testing of the hypotheses presented to evaluate the validity of our claims. Also, we would like to see this debate about the scientific veracity of NLP be put to rest. In order for that to happen, more research on this area should be made, along with the acknowledgment of the limitations that were encountered. We see this as a crucial aspect to avoid biased claims, which will, consequently foster more credibility to the field of NLP.

Limitations

When writing this study, we intended on proving that NLP can, in fact, be used to optimize performance levels of the ones influenced by it. In order to do so, we would prefer to carry out tests with experimental and control groups. This would provide us with more believable results and more compelling arguments to add to the discussion of NLP's effectiveness, as well as, its scientific validity. Unfortunately, due to time and budget restrictions, we could not perform such tests. To register trustworthy results, we would have to spend more time than the one we in fact had to register the progresses, not to mention the remaining time to perform research and finish writing the dissertation. With only ten months to prepare, submit and present this thesis, we saw the theoretical approach as the most suitable option and our best way to further the knowledge on this issue. Additionally, when researching on some articles, we encountered some that were potentially useful for the dissertation, but were unfortunately unavailable, either due to budget or unattainability reasons.

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Appendix

18	Neuro	The efficacy of adult age and new age learning systems, NP and their use in the workplace for the development of new skills and competencies.	Arnold, K. J.	Review Transformation through Innovation and Knowledge Management: An Evidence-Based Approach to Organizational Learning (2008) ISBN 978-0-13-0350-00-0	2008	2012/2017	Empirical	Article not available						
19	Neuro	Neuro-Inspired programming & AI for complex systems (e.g., robotics, autonomous vehicles, etc.)	Tony, P., Mishkin, L.	Neuro-Inspired Programming & AI: A Practical Approach to Designing Intelligent Systems (2015) ISBN 978-1-4939-9888-1	2015	2012/2017	Theoretical	Not available						
20	Neuro	Learning through NP	Harold, M., Chaffin, J., Shiffrin, R.	Proceedings - 2009 International Conference on Intelligent Systems and Knowledge Engineering, ISKE 2009, 2009, ISBN 978-0-7695-3822-1	2009	2012/2017	Empirical	Not available						
21	Neuro	Neuro-Inspired programming techniques to improve the efficiency of cognitive systems	Brown, H., Cui, F.	Journal of Applied Research in Artificial Intelligence, 2012, 25(1), 1-12	2012	2012/2017	Theoretical	Not available						
22	Neuro	Challenges regarding the design of NP in the workplace	Popovic, M.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017		Not available						Article not available
23	Neuro	Neuro-Inspired programming & its use in the workplace	Nguyen, A., Arslan, A.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017	Empirical	Not available						Study of NP approaches in a workplace context
24	Neuro	Neuro-Inspired programming learning: The Potential of Neuro-Inspired Programming	Tony, P., Mishkin, L., Mishkin, D.	Journal of Transformation Education, 2012, 1(1), 1-12	2012	2012/2017	Empirical	Not available						Application of NP techniques in the workplace
25	Neuro	NP in the workplace: A review of the literature	Mishkin, D., Mishkin, L.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017	Not available	Not available						Article not available
26	Neuro	Learning under more effective conditions through NP in the workplace	Proffitt, J.	The Learning Organization, 2012, 19(1), 1-12	2012	2012/2017	Theoretical	Not available						Study of NP approaches in the workplace
27	Neuro	NP to promote effective learning in the workplace	Arnold, K., Mishkin, L.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017	Theoretical	Not available						NP used in the workplace
28	Neuro	Neuro-Inspired programming: A review of the literature	Daniel, T., Mishkin, L.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017	Theoretical	Not available						Study of NP approaches in the workplace
29	Neuro	Neuro-Inspired programming: A review of the literature	Mishkin, L., Mishkin, A.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017	Theoretical	Not available						Application of NP approaches in the workplace
30	Neuro	NP in the workplace: A review of the literature	Arnold, K.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017	Theoretical	Not available						Article not available
31	Neuro	Neuro-Inspired programming: A review of the literature	Nguyen, A.	Neuro-Inspired Computing, 2012, 1(1), 1-12	2012	2012/2017	Theoretical	Not available						Article not available

Keywords: "Neuro-Linguistic Programming" and "Enterprise"

Order (by year of publication)	Database	Name	Author(s)	Source	Year of Publication	Date of Search (dd/mm/yy)	Abstract	Empirical / Theoretical	Objectives	Results	Limitations	Relevant for this investigation?	Reason
1	ISI Work of Science	Considerations regarding the usage of NLP in elaborating business strategies	Pérezcu, M.	Metalingua International 13(7), pp. 63-66	2008	25/11/2017	"The modern enterprise acts in a dynamic environment which forces permanent changes and considerable investment efforts in order to take the given opportunities. Obviously, the connection to the environment's opportunities is not an option but a necessity, especially in the process of globalization. In this situation a strategic vision is necessary both for the management or the development of the company's activities. This orientation of the enterprise needs an integration pro-act of current actions in a future conduct, in order to subordinate them to some long term objectives. However, it's about a global attitude, a proactive behavior that gives a meaning to all the company's actions and it can be obtained by neuro-linguistic programming. This is because the usage of NLP pattern within the company requires the creation of a proper reorganization of organizational strategies."	-	Not available	Not available	Not available	-	Article not available
1	Scopus	Coaching SME managers: Business development or personal therapy? A mixed methods study	Gray, D.L., Ebers, Y., Grogan, H.	International Journal of Human Resource Management 25(4), pp. 583-592	2011	25/11/2017	"While a growing number of small- and medium-sized enterprises (SMEs) are making use of coaching, little is known about the impact such coaching has within this sector. (...) As part of a mixed methods approach, a survey tool was developed based upon a range of relevant research contributions from the UK's Management Occupational Standards and regimens analysed using importance-performance analysis, an approach first used in the marketing sector to evaluate customer satisfaction."	Empirical	"This study sought to identify the factors that influence managers' decision to engage with coaching, their perceptions of the coaching 'journey' and the kinds of benefits accruing from coaching: organisational, personal or both."	"Results indicate that coaching had a significant impact on personal attributes such as 'Managing Self-Cognition' and 'Managing Self-Optimisation', whereas the impact on business-oriented attributes was weaker. Managers' choice of coaches with psychotherapeutic rather than non-psychotherapeutic backgrounds was also statistically significant. We conclude that even in the competitive business environment of SMEs, coaching was used as a largely personal, therapeutic intervention rather than to build business-oriented competencies."	Not mentioned	Yes	Application of NLP approaches on changes in a business environment.
2	Scopus	Considerations regarding the usage of NLP in elaborating business strategies	Pérezcu, M.	Metalingua International 13(7), pp. 63-66	2008	25/11/2017	"The modern enterprise acts in a dynamic environment which forces permanent changes and considerable investment efforts in order to take the given opportunities. Obviously, the connection to the environment's opportunities is not an option but a necessity, especially in the process of globalization. In this situation a strategic vision is necessary both for the management or the development of the company's activities. This orientation of the enterprise needs an integration pro-act of current actions in a future conduct, in order to subordinate them to some long term objectives. However, it's about a global attitude, a proactive behavior that gives a meaning to all the company's actions and it can be obtained by neuro-linguistic programming. This is because the usage of NLP pattern within the company requires the creation of a proper reorganization of organizational strategies."	-	Not available	Not available	Not available	-	Article not available
3	Scopus	Application of e-Commerce for SMEs by using NLP principles	Manuel, P., Denise, D., Cesare, R.	IEEE International Engineering Management Conference pp. 470-473	2009	25/11/2017	"SMEs play an important role in the economy of developed and developing countries with their flexibility and ability to adapt new business practices (...). In order for SMEs to take part in the international market, they must first overcome these scarce practices. Why are SMEs unable to organize themselves with professional and competitor customer relation management? The simple and straightforward answer to this is the economical constraints to establish conventional customer care department. SMEs can no longer rely on scarce any more because there is a proven technology available at low cost that will be the answer: e-Commerce (...). In order to maintain high customer relation relation we need to be able to "read" their thinking and behavior to ensure that we appeal to what really matters to them. Not only we need to "read" these styles, but also we need to have the flexibility to respond to them."	Theoretical	"In this paper design issues of e-Commerce are analyzed from the perspective of Neuro Linguistic Programming (NLP) to help Small and Medium-sized Enterprises (SMEs) in identifying and understanding better of their potential customers in the global space."	"We discussed the same of the disadvantages of SMEs to reach the global market. e-Commerce not only helps to overcome these barriers but also provides a cutting edge technology over the competition. SMEs normally target a small number of customers. We discussed how to identify, design, and understand the customers of SMEs. Based on the interests of the customer, we identified how the layout of e-Commerce should be designed to accommodate features to satisfy and retain customers of SMEs."	Not mentioned	Yes	Application of NLP principles on e-Commerce
4	Scopus	User interface design of e-Commerce for SMEs	Manuel, P., Denise, D.F., Zengin, H., Williams, A.	Proceedings of the International Conference on Internet Computing 2, pp. 543-546	2009	25/11/2017	"Although Small and Medium-sized Enterprises (SMEs) traditionally focus on domestic markets, they are able to reach global markets even with the introduction of e-commerce. The traditionally active SMEs are generally growing faster than the ones that are only targeting domestic markets. However, the globalization requires an effective use of information technologies. Some of the barriers of the use of information technologies are complex electronic equipment, non-availability of experts, and high initial investment. This paper discusses how to identify and understand the customers of SMEs. It is also studied how a business layout of e-Commerce is designed based on the needs and interests of our customers. The design issues of e-Commerce are analyzed from the perspective of Neuro Linguistic Programming (NLP)."	-	Not available	Not available	Not available	-	Article not available

Keywords: "Neuro-Linguistic Programming" and "Marketing"

Order by year (Publication)	Database	Name	Author(s)	Source	Year of Publication	Date of Search (if known)	Abstract	Empirical / Theoretical	Objectives	Results	Limitations	Relevant for the investigation?	Reason
1	ISI Web of Knowledge	Prospect of Marketing, Neuromarketing and Neuro Linguistic Programming	Alvarez-Calderon, J.; Garcia-Rondon, I.	CIENCIA UNEMI Volume: 9 Issue: 19 Pages: 99-105	2016	25/12/2021	"Enterprises as well as society are living uncertainty times and change, due to mistrust and insecurity that markets show, also by the price variation; the political, economic, and governmental factors demonstrate a deficient administrative leadership. It should be established well planned sales, which are structured with parameters of supply, demand, and certain forms of marketing that are established today. This fact causes demotivation mainly by the consumer market trends, which recover information by those who purchase products based on this reality. This theme intends to break a business paradigm aimed at creating a dynamism, to innovate and build strategic public policies that benefit the growth of the company and satisfaction of internal and external customers; the goal is to create a new culture based on Multiple intelligences, creative processes, integrated sensory development, and diagnostic techniques of neuroscience, highlighting the Neuromanagement, the Neuromanagement of human resources, the Neurocommunication, and the Neuromarketing mainly, in this work, the study of knowledge of the human brain is incorporated, the development of intelligence in our daily task by seeking to generate greater customer satisfaction and a better future for the company."	Theoretical	To shed some light on the concept of Neuromarketing as well as combining it with NLP.	Neuromarketing has the goal of gauging customer satisfaction, taste and preferences. It does not aim to influence or determine whether someone chooses product A over B.	Not mentioned	Yes	Neuromarketing can be a useful field when analyzing NLP in a business context.
2	ISI Web of Knowledge	Do titles matter in sport psychology? Performer attitudes toward professional titles and the effect of a brief intervention	Woolwey, T., Howard, C.	Sport Psychologist 29(2), pp. 171-182	2015	25/12/2021	"Understanding the practitioner attributes that influence consumers' preferences is of vital importance to licensing organizations and individual practitioners in the field of sport psychology. This study examined consumer preferences toward three professional titles (sport psychologist, life coach, and neuro-linguistic programming practitioner) and a range of other practitioner characteristics, as well as the extent to which a brief intervention impacted those preferences."	Empirical	Examination of which attributes are considered more important by athletes when coached by a life coach, a sports psychologist and a NLP practitioner.	"Conjoint analysis was used to determine the relative importance of practitioner attributes pre- and post-intervention. Interpersonal skills emerged as the most important attribute before intervention. Several significant, post-intervention changes emerged in consumer preferences for practitioners, including an increased salience of professional title."	Not investigated, since the article is not relevant for this discussion.	No	Not investigated, since the article is not relevant for this discussion.
3	ISI Web of Knowledge	NLP as a Communication Strategy Tool in Libraries	Giamakopoulou, G.; Sakis, D.; Kourou, I.	INTERNATIONAL CONFERENCE ON INTEGRATED INFORMATION (IC-INFO) 2014 Book Series: AIP Proceedings Volume: 1544 pp.89-90	2015	25/12/2021	"The role of communication is a catalyst for the proper function of an organization. This paper focuses on libraries, where the communication is crucial for their success. In our opinion, libraries in Greece are suffering from the lack of communication and marketing strategy. Communication has many forms and manifestations. A key aspect of communication is body language, which has a dominant communication tool the neuro-linguistic programming (NLP). The body language is a system that expresses and transfers messages, thoughts and emotions. More and more organizations in the public sector and companies in the private sector base their success on the communication skills of their personnel. The NLP suggests several methods to obtain excellent relations in the workplace and to develop clear communication. The NLP theory is mainly based on the development of standards (communication model) that guarantees the expected result."	Empirical	Due to the lack of a marketing strategy and communication in the Greek libraries, the researchers decided to perform a qualitative and quantitative research using NLP communication models.	"From the qualitative analysis it is observed that the surveyed researchers in the public sector and particularly in academic libraries, it is very likely in the private sector to have a greater percentage of executives who will have more communication skills."	"A problem regarding the qualitative and quantitative research was in some cases the lack of cooperative respondents. Also a problem was the limitation of research in the public sector and particularly in academic libraries. It is very likely in the private sector to have a greater percentage of executives who will have more communication skills."	Yes	Usage of NLP techniques to enhance the communication performance. Approaches may be used in an organizational context.
4	ISI Web of Knowledge	The Impact of the Neuro-Linguistic Programming on the Sales from the Motor Vehicle and Real Estate Area	Despoina, Neoklis; Mouna, Olaya	E-BUSINESS MANAGEMENT AND ECONOMICS Book Series: International Proceedings of Economics Development and Research Volume: 3 Pages: 97-+	2011	25/12/2021	"The importance of the two fields in the Romanian and global economy, the immediate need to maintain and attract new clients on the background of the reduction of the population's income, and the possible success of the NLP techniques in sales and negotiation, represents serious reasons for the present article. Acting in the spirit of the NLP concept means conveying both profitable and image capital, to the important companies in the field. The actual situation from the Romanian market sales and offers a new perspective regarding the fields of car sales and real estate and regarding the efficiency of people from the system."	Theoretical	"The purpose of this article is to research and emphasize the sales efficiency of the car dealers and real estate agents from the perspective of the Neuro-Linguistic Programming techniques. "	"In conclusion, we consider that the Neuro-Linguistic Programming has a real effect on the sales performances. We can notice this thing only looking at the difference between the real estate agents and the car dealers, as a result of the managers want the company's prosperity it's good to offer the sales agents NLP trainings, since the results are immediately visible."	Not mentioned	Yes	The paper analyzes the impact of NLP in a field that is directly connected to business
5	ISI Web of Knowledge	Coaching SME managers: business development or personal therapy? A mixed methods study	Gray, D.; Elvins, Y.; Gough, H.	INTERNATIONAL JOURNAL OF HUMAN RESOURCE MANAGEMENT Volume: 22 Issue: 4 pp.468-482	2011	25/12/2021	"While a growing number of small and medium sized enterprises (SMEs) are making use of coaching, little is known about the impact such coaching has within this sector. As part of a mixed methods approach, a survey tool was developed based upon a range of relevant management competencies from the SME Management Circumplex Model and responses analysed using importance-performance analysis, an approach first used in the marketing sector to evaluate customer satisfaction."	Empirical	This study sought to identify the factors that influence managers' decision to engage with coaching, their perceptions of the coaching 'journey' and the links of benefits, accuracy from coaching, organisational, personal or both."	"Results indicate that coaching had a significant impact on personal attributes such as 'Managing Self-Cognition' and 'Managing Self-Emotions', whereas the impact on business-oriented attributes was weaker. Managers' choice of coaches with psychotherapeutic rather than non-psychotherapeutic backgrounds was also statistically significant. We conclude that even in the competitive business environment of SMEs, coaching was used as a largely personal, therapeutic intervention rather than to build business-oriented competencies."	Not mentioned	Yes	Application of NLP approaches on managers in a business environment.
6	ISI Web of Knowledge	User interface design of e-Commerce for SMEs	Manuel, P.; Demetris, O.F.; Zengin, H.; Williams, A.	Proceedings of the International Conference on Internet Computing 2, pp. 545-546	2003	25/12/2021	"Although Small and Medium-sized Enterprises (SMEs) traditionally focus on domestic markets, they are able to reach global markets early with the introduction of e-Commerce. The internationally active SMEs are generally growing faster than the ones that are only targeting domestic markets. However the globalization requires an effective use of information technologies. Some of the barriers of the use of information technologies are complex electronic operations, non-availability of experts, and high initial investment. This paper discusses how to identify and understand the customers of SMEs. It also studied how a business model of e-Commerce is designed based on the needs and interests of our customers. The design issues of e-Commerce are analyzed from the perspective of Neuro-Linguistic Programming (NLP)."	-	Not available	Not available	Not available	-	Article not available
1	Scopus	Do titles matter in sport psychology? Performer attitudes toward professional titles and the effect of a brief intervention	Woolwey, T., Howard, C.	Sport Psychologist 29(2), pp. 171-182	2015	25/12/2021	"Understanding the practitioner attributes that influence consumers' preferences is of vital importance to licensing organizations and individual practitioners in the field of sport psychology. This study examined consumer preferences toward three professional titles (sport psychologist, life coach, and neuro-linguistic programming practitioner) and a range of other practitioner characteristics, as well as the extent to which a brief intervention impacted those preferences."	Empirical	Examination of which attributes are considered more important by athletes when coached by a life coach, a sports psychologist and a NLP practitioner.	"Conjoint analysis was used to determine the relative importance of practitioner attributes pre- and post-intervention. Interpersonal skills emerged as the most important attribute before intervention. Several significant, post-intervention changes emerged in consumer preferences for practitioners, including an increased salience of professional title."	Not investigated, since the article is not relevant for this discussion.	No	Not investigated, since the article is not relevant for this discussion.
2	Scopus	Individual path dependency and social mechanisms: the robustness of sociology	Ruedenbeck, M.K.H.	Journal of Futures Studies 15(4), pp. 25-44	2011	25/12/2021	"Path dependency research focuses on the path dependence of social and economic systems. The market, different facets of self-reinforcement have been tried to identify during their analysis. Recently, scholars transformed path dependence to organizational systems and enlarged the number of facets for self-reinforcement. Interestingly, early and newer path dependency research struggled to explain the role of the individual in path dependent processes but use concepts of human-behavior interrelationships, learning, and power."	Theoretical	"This paper provides a framework for individual path dependency leading to a rigidity of social systems."	-	-	No	Article is not relevant for the topic of the discussion. Additionally, only a limited number of references are made to NLP.
3	Scopus	Personal development under market conditions: NLP and the emergence of ethics of sensitivity based on the idea of the hidden potential of the individual	Savujak, K.	Journal of Contemporary Religion 26(2), pp. 189-205	2011	25/12/2021	"Courses in personal development have become the site of a remarkable alliance between modern working life and new religious forms over recent decades. Firms and public organizations in Denmark and other European countries have adopted personal development as part of their mission statements and added it to their human resources policies and general values. Work on the transformation of the self, one's thoughts, and ideas is not just seen as the way to a better working life, but also to economic wellbeing. This has created a market for courses in personal development, which brings consultants and human resource managers together in companies and organizations. (...) The article focuses on the relationship between New Age practices and modern management, and the development of a new work ethics based on sensitivity."	Theoretical	By focusing on "the relationship between New Age practices and modern management, and the development of a new work ethics based on sensitivity", this article attempts to answer questions such as: "What is the economic aspect of this new ethics? What is its rationale and in what sense is it linked to a market?"	Author notes that employees have adopted a new attitude to work; they see it as an opportunity for self-improvement. This mindset can be boosted by implementing NLP techniques.	Not mentioned	Yes	Study of NLP approaches in a business context.

4	Scopus	Coaching SME managers: Business development or personal therapy? A mixed method study	Gray, D., Elms, V., Gorgekar, H.	INTERNATIONAL JOURNAL OF HUMAN RESOURCE MANAGEMENT Volume: 22, Issue: 4, pp.863-882	2011	26/12/2021	"While a growing number of small- and medium-sized enterprises (SMEs) are making use of coaching, little is known about the impact such coaching has within this sector. As part of a mixed methods approach, a survey tool was developed based upon a range of relevant management competencies from the UK's Management Occupation Standards and responses analysed using importance-performance analysis, an approach first used in the marketing sector to evaluate customer satisfaction."	Empirical	"This study sought to identify the factors that influence manager's decision to engage with coaching, their perceptions of the coaching journey and the kinds of benefits arising from coaching: organisational, personal or both."	"Results indicate that coaching had a significant impact on personal attributes such as 'Managing Self-Capacity' and 'Managing Self-Emotions', whereas the impact on business-oriented attributes was weaker. Managers' choice of coaches with psychotherapeutic rather than non-psychotherapeutic backgrounds was also statistically significant. We conclude that even in the competitive business environment of SMEs, coaching was used as a largely personal, therapeutic intervention rather than to build business-oriented competencies."	Not mentioned	Yes	Application of NLP approaches on managers in a business environment.
5	Scopus	Bridging the great divide - the transfer of techniques	Nancarrow, C., Moxlin, A., Shankar, A.	Journal of Knowledge Management Volume: 14(6), pp. 27-37	2010	25/12/2021	"For many years qualitative and quantitative research have been seen as methodological rivals in an often polarised debate on issues of reliability and validity, with little regard to bridging the humanist positivist divide. This paper explores some of the recent developments where a more eclectic and constructive approach could herald the wider adoption of techniques from each side of the divide"	Theoretical	The paper "discusses ways in which qualitative techniques might be incorporated in quantitative research and quantitative techniques in qualitative research - a transfer of techniques. Explores the use of neuro-linguistic programming (NLP) and projective techniques in quantitative research. Reports the results of customising a self-completion questionnaire to a respondent's preferred representational system (PRS)."	"Both qualitative and quantitative research may benefit by careful use of techniques from 'the other side of the divide'. In the first instance, we examined qualitative techniques, NLP and projective techniques that could be adopted in certain types of quantitative research. The NLP principle of mirroring a respondent could include tailoring question wording in questionnaires to a respondent's PRS to gain greater levels of support, co-operation and, therefore, greater productivity from open-ended questions. This application of NLP might be particularly relevant to consumer panels used for ad hoc studies and interrogated by computers. There was some experimental evidence to support this application. The adoption of several other NLP-related techniques in quantitative research were considered, namely the value of: the meta model as a framework for probing open-ended questions; indirect measures of preference based on submodality coding and the perceived position of objects in personal space; probing a respondent's impressions of a brand across all modalities."	Not mentioned	Yes	Application of NLP approaches for a company environment.
6	Scopus	Neuro-linguistic programming techniques to improve the self-efficacy of undergraduate dissertation students	Skinner, H., Cruft, R.	Journal of Applied Research in Higher Education Volume: 11(1), pp. 30-38	2009	26/12/2021	"This paper aims to address the gap in the extant literature examining the support offered to, and required by, students in light of the changing nature of the student undertaking and the changing nature of the student undertaking. For many years, it will be the first time that they will be undertaking a self-directed, major research project."	Theoretical	"The focus of this paper is to present the neuro-linguistic programming (NLP) framework for setting well-formed outcomes that was offered to students in the initial session of a pilot dissertation workshop support programme, initially targeting students completing dissertation projects on marketing topics within the Business School 'under modules on Research Methods. The focus of this programme was not on methodology, but on soft skills such as goal setting, time management and motivation, along with practical skills such as those required to take advantage of developments in data processing technology."	"The paper also presents the findings of qualitative data gathered from responses of students in focus groups and in-depth interviews designed to explore students' on-going motivation throughout the dissertation process. The paper concludes with a comparison of the results of those students who took part in the workshop sessions with those that did not."	Not mentioned	Yes	Potential correlation can be made by referencing this article.
7	Scopus	User interface design of eCommerce for SMEs	Manuel, P., Demmel, O.F., Zanghi, H., Williams, R.	Proceedings of the International Conference on Internet Computing Volume: 2, pp. 545-546	2003	25/12/2021	"Although Small and Medium-sized Enterprises (SMEs) traditionally focus on domestic markets, they are able to reach global markets easily with the introduction of eCommerce. The internationally active SMEs are generally growing faster than the ones that are only targeting domestic markets. However the globalization requires an effective use of information technologies. Some of the barriers of the use of information technologies are complex electronic operations, non-availability of experts, and high initial investment. This paper discusses how to identify and understand the operations of SMEs. It also studies how a business layout of eCommerce is designed based on the needs and interests of our customers. The design issues of eCommerce are analyzed from the perspective of Neuro Linguistic Programming (NLP)."	-	Not available	Not available	Not available	-	Article not available
8	Scopus	Application of eCommerce for SMEs by using NLP principles	Manuel, P., Demmel, O., Gorenor, R.	IEEE International Engineering Management Conference pp. 470-473	2003	26/12/2021	"SMEs play an important role in the economy of developed and developing countries with their flexibility and ability to adapt new business practices. [...] In order for SMEs to take part in the international market, they must first overcome these various practices. Why are SMEs unable to organize themselves with professional and competitive customer relation management? The simple and straightforward answer to this is the economic constraints to establish conventional customer care department. SMEs can no longer rely on excessive more because there is a proven technology available at low cost that will be the answer: eCommerce. [...] In order to maintain high customer retention ratios we need to be able to "model" their thinking and behavior to ensure that we appeal to what really matters to them. Not only we need to "speak" their style, but also we need to have the flexibility to respond to them."	Theoretical	"In this paper design issues of eCommerce are analyzed from the perspective of Neuro Linguistic Programming (NLP) for help Small and Medium-sized Enterprises (SMEs) in identifying and understanding better of their potential customers in the global space."	"We discussed the some of the disadvantages of SMEs to reach the global market. eCommerce not only helps to overcome these barriers but also provides a cutting edge technology over the competitors. SMEs normally target a small number of customers. We normally target a small number of customers, we normally target a small number of customers, we normally target a small number of customers, we normally target a small number of customers. Based on the interests of the customers, we identified how the layout of eCommerce should be designed to accommodate features to satisfy and retain customers of SMEs."	Not mentioned	Yes	Application of NLP principles on eCommerce
9	Scopus	Speaking the same language: The relevance of neuro-linguistic programming to effective marketing communications	Skinner, H., Stephens, P.	Journal of Marketing Communications Volume: 9(3), pp. 177-192	2003	25/12/2021	"Individuals process each and every encounter with the external environment using sensory system representations (sight, sound, touch, taste, etc.). Studies of neuro-linguistic programming have indicated that each individual tends to have a preferred sensory representational system with which they will internally code these experiences. Market segments are comprised of individuals who, although possessing similarities across traditional segmentation bases, also have different preferred sensory modalities. Therefore, if consumers within any given target market segment do not all talk the same sensory language, marketers are failing to get their message across to everyone within that segment."	Empirical	"This study is concerned with examining the efficacy of television advertising in communicating to those within a target group by exploring the links between the advertisements that 'speak' to them most and their preferred representational systems. It finds that participant reactions to those advertisements that they registered as having the most effect were expressed predominantly in language relating to their preferred sensory representational systems. Furthermore, where participants with different representational systems chose the same advertisement as having the most effect, the reasons for choice differed on a sensory basis."	"The purpose of this research was to evaluate the links between responses to advertisements and personal sensory representational systems, with a view to making marketing communications more effective. [...] An analysis of the data collected from the focus groups confirmed that the reactions of the participants to the advertisements that they felt had the most effect on them were predominantly expressed in language relating specifically to their preferred sensory representational systems, thereby supporting the neuro-linguistic programming suggestion. The data also showed that, where participants with different representational systems chose the same advertisement as having the most effect, the reasons for choice differed on a sensory basis. This would appear to support the proposition from Brown and Turnbull (2000) that, in order to improve the likelihood of attracting and maintaining a person's interest, communication should be made in a format that will appeal to their preferred modalities; furthermore, since all three representational groups chose one single advertisement as having the most effect and some advertisements were chosen by only one sensory grouping, it would appear that segments of the market are being overlooked by advertisers."	Not mentioned	Yes	NLP principles are thoroughly explained in the article and could be used in the dissertation.
10	Scopus	Bridging the great divide - the transfer of techniques	Nancarrow, C., Moxlin, A., Shankar, A.	Marketing Intelligence & Planning Volume: 14(6), pp. 27-37	1996	25/12/2021	"For many years qualitative and quantitative research have been seen as methodological rivals in an often polarised debate on issues of reliability and validity, with little regard to bridging the humanist positivist divide. This paper explores some of the recent developments where a more eclectic and constructive approach could herald the wider adoption of techniques from each side of the divide"	Theoretical	The paper "discusses ways in which qualitative techniques might be incorporated in quantitative research and quantitative techniques in qualitative research - a transfer of techniques. Explores the use of neuro-linguistic programming (NLP) and projective techniques in quantitative research. Reports the results of customising a self-completion questionnaire to a respondent's preferred representational system (PRS)."	"Both qualitative and quantitative research may benefit by careful use of techniques from 'the other side of the divide'. In the first instance, we examined qualitative techniques, NLP and projective techniques that could be adopted in certain types of quantitative research. The NLP principle of mirroring a respondent could include tailoring question wording in questionnaires to a respondent's PRS to gain greater levels of support, co-operation and, therefore, greater productivity from open-ended questions. This application of NLP might be particularly relevant to consumer panels used for ad hoc studies and interrogated by computers. There was some experimental evidence to support this application. The adoption of several other NLP-related techniques in quantitative research were considered, namely the value of: the meta model as a framework for probing open-ended questions; indirect measures of preference based on submodality coding and the perceived position of objects in personal space; probing a respondent's impressions of a brand across all modalities."	Not mentioned	Yes	Application of NLP approaches for a company environment.

Keywords: "Neuro-linguistic Programming" and "NLP"

Date (by year of publication)	Author(s)	Name	Author(s)	Source	Year of Publication	Date of Search (dd/mm/yyyy)	Abstract	Empirical/Theoretical	Conclusions	Results	Limitations	Relevant for the investigation?	Reason	
1	(S) Web of Knowledge	Interactive Method of Teaching C&I Services	Brownless, S.	SCIENCE AND EDUCATION: Year 4, Page 147-152	2013	05/02/2017	"The responsibility of a manager of a service requires implementation of a set of knowledge, abilities, and skills in different areas of activity, which is to be constantly updated and continuous learning. Traditional teaching methods do not meet modern requirements of managers of all services, which require the implementation of innovative approaches into the educational process. Teaching manager staff of all services requires great attention and care. The necessity of increasing efficiency is oriented at the quality, and not at the amount of training programs, because from the same theoretical activities into the training process of all services are based, and from the other hand, they should meet the personal development of the manager. The research in this document of the Main Department of the State Service, and the materials of the International Association of Executive Staff of National Academy for Public Administration under the President of Ukraine, author's observations and applications. Modern methods of increasing the efficiency of teaching C&I Service staff are reviewed and described in the article."	Theoretical	The author looks for ways to train more effectively, not based on the amount of training, but on the quality of the training, which determines the match between requirements for a specialist and his/her real opportunities.	The author has revealed training needs of managers and has tested the efficiency of increasing the efficiency of training of managers oriented at individual demands, which determine the match between requirements for a specialist and his/her real opportunities.	Not available	No	Article not available and written in a language not familiar to the author.	
2	(S) Web of Knowledge	Message Reframing in Advertising	Neudecker, N., East, E.-B., Schuster, T., Volkus, S.	Psychology and Marketing 31(1), pp. 946-957	2014	08/02/2017	"Various communication techniques such as humor or two-sided argumentation are frequently used in advertising. One technique that is common but has not been conceptualized is the deliberate change of perspective of specific products or brands. Based on the reframing method used in neuro-linguistic programming (NLP) this technique is conceptualized as message reframing, defined as a communication technique that changes the conceptual and/or emotional value or meaning in relation to a brand and is experienced by the client in a different frame than the same brand equally well or better. The effects of message reframing in comparison to conventional advertisements are examined in a contrast to humor and two-sided argumentation are hypothesized and tested in an experimental study."	Theoretical	"The present study investigated the effects of message reframing compared to conventional advertising messages as well as the related reframing techniques of humor and two-sided argumentation."	"The results reveal that message reframing outperforms traditional advertising techniques regarding attention toward and perceived novelty, without lowering the ad and attitude toward the brand. Moreover, message reframing does not show the deterioration of source credibility commonly observed in humorous messages, and leads to higher attention, perceived novelty, and attitude toward the ad than two-sided messages."	"This study focused solely on cars as an example of high-involvement products. Future research should explore the investigation for other high-involvement product categories and should also investigate the effects of message reframing for the low-involvement products. Reframing concerning a possible underlying effect of general involvement. Moreover, as message reframing is directly related to consumer brand knowledge, general involvement should also be taken into account. Similar to a recent study by Evers (2011) on two-sided messages, it can be assumed that consumers with high brand knowledge are able to understand and interpret reframing better and more easily than consumers with low brand knowledge."	Not mentioned	Yes	Message reframing may be used as a business contact.
3	(S) Web of Knowledge	Comparing specific medical care with specific medical care plus the Lighting Process (LP) for chronic fatigue syndrome or multiple sclerosis (MS) study protocol for a randomized controlled trial (SCALE Trial)	Crawley, E., Mills, N., Halliwell, W., et al.	TRIALS Volume 14, Article 48	2013	21/02/2017	"Chronic fatigue syndrome or multiple sclerosis (CFS/MS) is a relatively common and persistent condition with limited evidence base for treatment. Standard treatment for patients with CFS/MS includes cognitive behavioral therapy (CBT) and graded exercise therapy (GET). The Lighting Process (LP) is a treatment intervention based on concepts of neuro-linguistic programming, delivered over three consecutive days in group sessions, although over 200 studies with CFS/MS dates of course each year, there are no reported studies on the effectiveness or cost effectiveness."	Empirical	"This study will assess whether using the LP (Specialist Medical Care (SMC)) is effective and cost-effective compared to SMC alone. This study will provide detailed information on the implementation of the LP and SMC."	No results yet, as the pilot has yet to be implemented.	Not mentioned	No	Medical approach of NLP that cannot be applied in the business context.	
4	(S) Web of Knowledge	Distortion, Distortion and Data Collection: The Equivalence of the Neuro-Linguistic Programming (NLP) Model in Qualitative Interviews	Engel, J.	PROCEEDINGS OF THE 10TH EUROPEAN CONFERENCE ON RESEARCH METHODOLOGY FOR BUSINESS AND MANAGEMENT STUDIES Page: 271-277	2011	08/02/2017	"The skills required of the researcher undertaking qualitative interviews are considerable. A range of writers discuss the operation of a conversational approach, avoiding inhibiting interviewees, a subtle approach to asking follow-up questions and probing skills. These questioning and listening skills are of crucial importance in the context of semi-structured, exploratory interviews where there is no emergent, which is to be argued that there are a number of ways of conceptualizing the qualitative researcher's role in such situations. This article discusses the use of an ad-hoc follow-up questions they may be to gather rich and meaningful data."	Theoretical	"This paper explores the usefulness of the application of the NLP model in qualitative interviews, drawing on the experience of conducting research and applying the approach to semi-structured interviews."	"The main conclusions are that (1) The NLP model is an eclectic model and is well drawn on the model's knowledge of academics and the model's knowledge of professional practitioners, or 'praxis' (the connecting of learning to 'real' situations); (2) The good qualitative researcher remains conscious of the importance of skilled questioning, as well as the danger of collecting with an ethnographic participant. The NLP model provides the researcher with a 'tool' for critical questioning, as a way of understanding principles (i.e. the operating principle) is a possible way of ensuring questioning remains rigorous and, where appropriate, challenging; (3) Subsequently the model may provide a reference point against which to consider data. While the model is traditionally applied to individuals, it could be argued that specific concepts and techniques could usefully be applied to whole organisations or systems."	Not available	Not available	Article not available	
5	(S) Web of Knowledge	Neuro-linguistic programming: A key to business excellence	Singh, A., Arshath, M.	Total Quality Management and Business Excellence 19(1-2), pp. 130-147	2008	08/02/2017	"In the present scenario of rapid change and technological advancement, academics and management professionals around the world are in a dilemma as to how to achieve a competitive edge to promote performance in an era of stiff competition. The globalization of the economy has opened up floodgates of knowledge and opportunities for those who are able to harness the right tools and techniques to their advantage. Probably the greatest challenge that is presented by this globalisation is the management of human resources. This paper presents a novel (overall staffing levels and micro-delegation) to work to labor productivity level. Human resource management is also about the role of strategic business partners. Successful companies realize that their competitive advantage lies in their people. They have defined and redefined their responsibilities and develop a compelling response for critical jobs that require human resources to value to the bottom line."	Empirical	"The aim of the present study is to examine the role of Neuro-linguistic programming in building the organizational capabilities and driving the success of business organisations. The data was collected from 100 employees of a multinational company and analyzed using different levels of statistical analysis to test the null hypothesis of no effect of NLP on the business part of staff."	"The results were further analyzed and compared with the findings of exploratory research undertaken to study the process of Neuro-linguistic Programming (NLP). It was revealed that NLP gives the managers and staff a significant improvement in the efficiency to work with, understand and motivate other people, both individually and in groups. An NLP-oriented manager is used in all aspects, especially with the human factor, which is the vital element in this scenario."	Not mentioned	Yes	Study of NLP approaches in a business context.	
6	(S) Web of Knowledge	Managing Knowledge in Organizational Decision Through Genetic Algorithms for Strategic Information Systems	Gupta, M., Kumar, V., Mahapatra, T.	Evolutionary Through Intelligent Systems 1(1), pp. 129-133	2004	05/02/2017	"Decision making can be classified by organizational level, corresponding to its strategic, management, knowledge and operational level. Operational control personnel face fairly well-structured problems, in contrast, strategic management levels highly unstructured problems. In this level, knowledge based core competencies play an important role. In handling unstructured problems, Knowledge Management increases the ability of the organization to learn from its environment and to incorporate knowledge into its business processes. Evolution of neural language managers was explored in neuro-linguistic programming, and tested in the evolutionary theory of language."	Theoretical	"This paper attempts a framework of evolutionary knowledge management in handling unstructured decisions for a strategic information system based on concepts of genetic algorithms."	Not available	Not available	No	Article not available.	
7	(S) Web of Knowledge	User interface design of Commerce for SMEs	Manuel, P., Gomez, C.F., Zeng, H., Wilman, A.	Proceedings of the International Conference on Internet Computing 2, pp. 543-546	2003	08/02/2017	"Through their application of neuro-linguistic programming (NLP) traditionally focus on domestic markets, they are able to reach global markets easily with the introduction of Commerce. The international sector SMEs are generally growing faster than the ones that are only targeting domestic markets. However the globalization means an effective use of information technologies. Some of the barriers of the use of information technologies are complexed in terms of the availability of experts, and high level investment. This paper discusses how to identify and understand the customers' needs of SMEs. It also studied how a business layout of Commerce is designed based on the needs and interests of our customers. The design issues of Commerce are analyzed from the perspective of Neuro-Linguistic Programming (NLP)."	Not available	Not available	Not available	Not available	Article not available		
8	(S) Web of Knowledge	Psychotherapy for system requirements	Garcia, R., Rivas, C.	SECOND IEEE INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING INFORMATICS, PROCEEDINGS Page 75-80	2009	08/02/2017	"System requirements which fulfill their customer's real requirements to be successful, but how can these real requirements be obtained efficiently for some stakeholders, the source of information, namely the software engineer's process, produces business answers to that question."	Theoretical	"This paper will introduce an approach which was transferred from the field of psychotherapy to the field of requirements engineering. A set of rules was formed to assist the analysis and synthesis of customer requirements represented in a tree. The paper reviews the foundations of the approach, explains its details with different examples, and makes the experience made in various parts of business and technology."	A model of communication was developed to reduce the occurrence of miscommunication cases.	Not mentioned	Yes	The article touches upon the subject of communication which can be important to establish connections to the business context.	
1	Scopus	Evidence-based Neuro-linguistic Psychotherapy: A meta-analysis	Duval, C., Gomez, M., Salazar, P.	Psychologia Danubiana 27(4), pp. 355-363	2015	08/02/2017	"Neuro-Linguistic Programming (NLP) framework has enjoyed enormous popularity in the field of applied psychology. NLP has been used in business, education, law, medicine and psychotherapy to identify people's patterns and alter their responses to stimuli, so they can better solve their problems, building and strengthening NLP skills, and achieving goals, creating stable relationships, eliminating barriers such as fears and phobias, handling work, confidence, and self-esteem, and achieving goals performance. Neuro-Linguistic Psychotherapy (NLP) incorporates NLP as a framework and of interventions in the treatment of individuals with different psychological and/or social problems."	Theoretical	"We aimed systematically to analyze the available data regarding the effectiveness of Neuro-Linguistic Psychotherapy (NLP). The present work is a meta-analysis of studies observing or randomized controlled trials, for evaluating the efficacy of Neuro-Linguistic Programming in individuals with different psychological and/or social problems."	"From a total number of 425 studies, 322 were removed and considered not relevant based on the titles and abstracts. Included in this study were 122 studies with numbers of participants ranging between 12 and 215. Subjects, the used majority of studies were prospective designs. The overall meta-analysis found that the NLP therapy may add an overall standardized mean difference of 0.4 with a confidence interval of 0.29-0.52. (...) Neuro-Linguistic Psychotherapy is a psychotherapeutic modality grounded in theoretical frameworks, methodologies, and interventions scientifically developed, including models developed by NLP, shows results that can be built on ground in comparison with other psychotherapeutic methods."	Relevant limitations primarily observational studies contributing to this study. However, limit confidence in the conclusions that might draw from the available evidence for NLP outcomes."	Yes	It is a recent study of NLP capabilities, and can serve as a support for arguments on the discussion.	
2	Scopus	The Direction of Desorption: Neuro-Linguistic Programming as a Lie Detection Tool	Mans, S., Vrij, A., Nashiro, E., et al.	Journal of Police and Criminal Psychology 27(3), pp. 100-105	2012	08/02/2017	"There is a myth in popular psychology, often echoed in police literature, that an eye witness, that specifies eye movements parallel to lies and truth telling. According to this line of thought, eye movements to the viewer's right indicate lying, as the viewer's eye is drawn to the side of his/her brain when their fabrication is being created."	Empirical	"The objective of this paper was to investigate the validity of the theory that claims that by watching the eye movements, truth and lies can be detected."	"We have put this hypothesis, derived from Neuro-Linguistic Programming, to the test in two experiments. In Experiment 1, a total of 208 participants (all at paragraphs) were interviewed at an experimental report about their fictitious story. All participants answered the questions truthfully and one question deceptively. Some participants answered a third question truthfully, whereas others answered the same question deceptively. No conclusion evidence was found for a relationship between specific eye movements and deception. In Experiment 2, a total of 11 participants described their real occupation in an interview and a pre-recorded occupation in another interview. Only three of the 11 participants revealed the eye-movement pattern predicted by NLP. Reasons for the existence of the myth that relate to specific eye movements are discussed."	Not mentioned	Yes	Relevant because it directly connects to the Eye Accounting Cue technique.	

Keywords
 "Neuro Linguistic Programming" and "Human Resources"

Order (By year of Publication)	Database	Name	Author(s)	Source	Year of Publication	Date of Search (dd/mm/yy)	Abstract	Empirical / Theoretical	Objectives	Results	Limitations	Relevant for the investigation?	Reason
1	ISI Web of Knowledge	Prospective of Marketing, Neuromarketing and Neuro Linguistic Programming	Alvarez Calderon, J, Garcia Rondon, I.	GENCIA UNEMI Volume 9 Issue 19 Pages: 99-105	2016	06/11/2017	"Enterprises as well as society are living uncertainty times and change, due to mistrust and instability that markets show, also by the price variation, the political, economic, and governmental factors demonstrate a deficient administrative leadership, it could be established well planned roles, which are structured with parameters of supply, demand, and certain forms of marketing that are established today, this fact causes demonstration mainly by the consumer market trends, when receiving information by those who purchase products based on this reality. This theme intends to break a business paradigm aimed at creating a dynamism, to innovate and build strategic public guidelines that benefit the growth of the company and satisfaction of internal and external customers; the goal is to create a new culture based on Multiple Intelligences, creative processes, integrated sensory development, and diagnostic techniques of neuroscience, highlighting the Neuromarketing, the Neuromanagement of human resources, the Neurocommunication, and the Neuromarketing mainly; in this work, the study of knowledge of the human brain is incorporated, the development of intelligence to our daily task by seeking to generate greater customer satisfaction and a better future for the company."	Theoretical	To shed some light on the concept of Neuromarketing as well as combining it with NLP.	Neuromarketing has the goal of engaging customer satisfaction, tastes and preferences. It does not aim to influence or determine whether someone chooses product A over B.	Not mentioned	Yes	Neuromarketing can be a useful field when analyzing NLP in a business context.
1	Scopus	Personal development under market conditions: NLP and the emergence of ethics of sensitivity based on the idea of the hidden potential of the individual	Bovbjerg, K.	Journal of Contemporary Religion 26(2), pp. 189-205	2011	05/10/2017	"Courses in personal development have become the site of a remarkable alliance between modern working life and new religious forms over recent decades. Firms and public organisations in Denmark and other European countries have adopted personal development as part of their mission statements and added it to their human resources policies and general values. Work on the transformation of the self, one's thoughts, and ideas is not just seen as the way to a better working life, but also to economic wellbeing. This has created a market for courses in personal development, which brings consultants and human resource managers together in companies and organisations. (...) The article focuses on the relationship between New Age practices and modern management, and the development of a new work ethic based on sensitivity."	Theoretical	By focusing on "The relationship between New Age practices and modern management, and the development of a new work ethic based on sensitivity", this article attempts to answer questions such as: "What is the economic aspect of this new ethic? What is its rationale and in what sense is it linked to a market?"	Author notes that employees have adopted a new attitude to work; they see it as an opportunity for self-improvement. This mindset can be boosted by implementing NLP techniques.	Not mentioned	Yes	Study of NLP approaches in a business context.
2	Scopus	NLP for stress mitigation in employees	Bao, D., Kukarni, D.	ICEMT 2010 - 2010 International Conference on Education and Management Technology Proceedings, 5657365, pp. 600-603	2010	05/10/2017	"Stress management in the workplace is a reality that most of us have to face for one reason or another and coping with it is the key to a long-term career success. Some careers are more stressful than others. The main causes of workplace stress appear to be linked to deficiencies in the management and organization of work. Stress and culture are not only predominantly seen in the industry but are actual even in the service sector."	Empirical	"This study directs itself for the study of organization culture and stress in an educational institute. It is normally presumed that the teaching profession is less stressful. With the changing demands in the educational paradigm and expectations from the stakeholders, the study and the findings there of presented in this paper have significant importance in redefining the premises of the education sector from knowledge management perspective."	"In this paper, two groups of employees are counselled with and with out NLP-intervention. Statistical analysis has been carried out to compare the efficacy of NLP intervention and it is observed that NLP intervention do mitigate employee's stress."	Not mentioned	Yes	Study of NLP approaches in a business context.
3	Scopus	Neuro linguistic programming: A key to business excellence	Singh, A., Abraham, A.	Total Quality Management and Business Excellence 19(1-2), pp. 139-147	2008	08/11/2017	"In the present scenario of rapid change and technological advancement, academicians and management professionals around the world are in a dilemma as to how to achieve a competitive edge to promote performance in this era of stiff competition. The globalization of the economy has opened up floodgates of knowledge and opportunities for them but globalization has also brought new challenges as to how to manage. Probably the greatest challenge that is presented by globalization is the management of the human resource pools. This is true at a macro (overall staffing levels) and micro (allocation of work to labor pools) level. Human resource management is now assuming a greater role to strategic business partners. Successful companies realize that true competitive advantage lies in their people. They have been forced to redefine their responsibilities and develop a compelling response for crises who dispute human resource's value to the bottom-line."	Empirical	"The aim of the present study is to examine the role of Neuro Linguistic Programming in building up the organizational capabilities and paving the way to business excellence. The data were collected through the use of questionnaire and structured interviews conducted with different clients of select companies based in the southern part of India."	"The results was further analyzed and compared with the findings of secondary research undertaken to study the genesis of Neuro Linguistic Programming (NLP). It was revealed that NLP gives the managers and staff a significant improvement in the efficiency to work with, understand and motivate other people, both individually and in groups. An NLP-oriented manager is found in all aspects, especially with the human factor, which is the vital element in this scenario."	Not mentioned	Yes	Study of NLP approaches in a business context.