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Sujeeta Bhatt and Susan Brandon

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Neurolinguistic Programming (NLP) in Investigative Interviewing: Recommended Alternative Methods

Sujeeta Bhatt and Susan Brandon*

Federal Bureau of Investigation, Washington, USA

Abstract

Neurolinguistic programming (NLP), intended as methods of influence and communication, was created by observing and categorizing assumed expert psychotherapists' behaviours in the 1970s. Since then, NLP has been offered not only as a way to treat a variety of physical and mental health issues, maximize human potential and improve interpersonal interactions, but also as a method to increase the effectiveness of criminal interviews and interrogations. However, research has consistently failed to find support for the basic premises of NLP. In lieu of NLP, empirically-based communication and negotiation methods (including active listening and verbal and non-verbal behavior matching and mimicry) should be used as a means to build rapport and trust between parties.

Keywords: *Neurolinguistic Programming, rapport, Linguistic Style Matching, mimicry*

Introduction

In this paper, we address the use of “neurolinguistic programming” (NLP) to elicit information during intelligence interviews and interrogations. Proponents of NLP within law enforcement communities claim that it increases rapport and interpersonal communication, helps detect deception, and makes the interviewer more persuasive (Gordon & Fleisher, 2006; Gray, 1991; Hess, 1997; Mayers, 1993; Rhoads & Solomon, 1987; Sandoval & Adams, 2001; Vrij & Lochun, 1997; Zulawski & Wicklander, 2002). Although independent observations of the use of NLP by intelligence agencies are not available, we have heard numerous claims to its usefulness and know that it recently has been part of military interrogation training courses (Adis, Ferro &

***All correspondence to:**

Susan Brandon
FBI/NSB/HIG
935 Pennsylvania Ave, NW, Washington, DC 20535
Mailstop: 801FL-HIG
Email: Susan.Brandon@ic.fbi.gov

Wisecarver, 2011; Druckman & Swets, 1988). However, decades of scientific studies have failed to find any consistent support for the basic tenants of the NLP “model” (Witkowski, 2012). Part of what we consider here, then, are reasons for the discrepancies between science and practice, and how these might be remedied.

Richard Bandler and John Grinder initially developed NLP based on the notion that theories of neurology and linguistics could be used to “program” an individual’s mind, body, and behavior. “Neuro” was used to refer to the mind and how mental life is organized, “linguistic” to language and how it is used and affects individuals, and “programming” to sequences of repetitive behaviors and how individuals act with purpose (Dilts, Grinder, Bandler, & DeLozier, 1980). The primary purpose of NLP was to create models of human excellence. In order to create these models, Bandler and Grinder observed people they identified as “therapeutic wizards” (Bandler & Grinder, 1983; Einspruch & Forman, 1985) from an eclectic array of fields including, behavioral psychology and cybernetics (Ashby, 1965), the Palo Alto school of brief therapy (Watzlawick, Beavin, & Jackson, 1967), gestalt therapy (Perls, 1969), cybernetic epistemology (Bateson, 1972), transformational grammar (Grinder & Elgin, 1973), Ericksonian hypnotherapy (Bandler & Grinder, 1975; Grinder, DeLozier, & Bandler, 1977), and person-centered counseling (Rogers, 1983). Rather than understanding the success of these “wizards” in terms of psychological principles, Bandler and Grinder simply observed and categorized their behaviors and used those categories to construct a model of interpersonal influence. Neither Bandler nor Grinder was interested in gathering empirical data to validate NLP; thus, they collected only anecdotal and testimonial data (Craft, 2001; Von Bergen et al., 1997). The resulting “model” of NLP was proposed to be “therapeutic magic” founded on beliefs in unlimited human potential, created reality, and access to the subconscious through observing body language cues (Dilts et al., 1980; Sharpley, 1987).

NLP proponents claimed that it could treat a number of conditions such as phobias, depression, addictive behaviors (e.g., smoking), homosexuality (sic), psychosomatic illnesses, and learning disorders, sometimes within a single, one-hour session (Bandler & Grinder, 1979). They also suggested that myopias and the common cold could be cured through the combination of NLP and hypnosis (Grinder & Bandler, 1981). The use of hypnotic regression with NLP was suggested to not only treat a problem, but also to render the sufferer amnesic such that they would deny ever having had the problem (Grinder & Bandler, 1981; Heap, 2008). In addition, proponents claimed that NLP could be used to maximize human potential and as such, a novice martial artist could use NLP to beat an expert or NLP could be used to develop a photographic memory (Bandler & Grinder, 1979; Bandler, 1992). Over the past four decades, NLP has become a popular interpersonal skills and communication training method, adopted worldwide by educators, psychotherapists, sports trainers, marketers, medics, and lawyers (e.g., Heap, 1988; Holdevici, 1990; Lankton, 2003; Tosey & Matheson, 2003, 2010; Mann, Vrij, Nasholm, Warmelink, 2012).

Criminal investigators describe NLP as useful for developing rapport in an interview or interrogation (e.g., Sandoval & Adams, 2001), where the focus is on the interviewer matching an interviewee’s nonverbal behavior, the manner in which they speak, and their choice of words. More often, NLP has been proposed as a way of helping an interrogator discern truth telling from lying in criminal interviews and interrogations (e.g., Gordon & Fleisher, 2006; Hess, 1997; Rhoads & Solomon, 1987; Zulawski & Wicklander, 2002). Here the focus is on an alleged relationship between eye movement and thought: for example, if right-handed people are visualizing an imagined event (i.e., something they are lying about), they are likely to look up to their right; if they are visualizing a remembered event (i.e., presumably something that they are not lying about), they are likely to look up and to their left.

The NLP Model: Evidence For and Against

The first tenant of NLP is that individuals unconsciously encode their thoughts and experiences using one of the five senses, referred to as their internal preferred representational system (PRS). The PRS is the individual's usual and preferred way of interacting with the world (Von Bergen et al., 1997). The most common presumed PRSs are the three principal senses: sight, sound, and touch (kinesthetic). An NLP-trained practitioner tries to identify which sensory mode a subject is using by listening to verbal predicates (i.e., verbs, adjectives, and adverbs: Vrij & Lochun, 1997). Optimal communication is assumed to occur among those who use the same predicate system (Fromme & Daniell, 1984). As such, when a practitioner uses language that is exhibited in a subject's PRS, the subject feels more understood, which makes him/her more susceptible to the practitioner's influence (Von Bergen et al., 1997). For example, if a practitioner uses statements such as "I see what you mean" in conversations with an individual who has a visual PRS, or "I hear you saying..." when talking to someone with an auditory PRS, the subject is assumed to relax and develop a greater sense of trust in the practitioner.

Research has yielded scant evidence to bolster the claims regarding any relationship between a PRS and the words people use. Birholtz (1981) investigated a preference for sensory words by asking subjects to describe positive and negative experiences from their pasts, presents, and anticipated futures. The results indicated that a significant number of subjects preferred the kinesthetic modality; and there was no correlation between this finding and the subjects' self-report of their PRSs. Individuals vary their use of verbal predicates based on the situation (Fromme & Daniell, 1984; Graunke & Roberts, 1986; Hammer, 1983; Mercier & Johnson, 1984) and seamlessly shift from one sensory modality to another (Atkin, Hollandsworth, & Alcorn, 1983; Sheehan, 1967). And, although forensic NLP practitioners propose that reflecting a subject's PRS by a practitioner will lead to an increase in confession rates due to increased feelings of trust (Rhoads & Solomon, 1987), there is no evidence to support this (Vrij & Lochun, 1997).

The proposal that NLP-based practices facilitate rapport building in witness or suspect interviews (e.g., Royce, 2005; Sandoval & Adams, 2001) may be more accurately described as the effective use of *active listening*, where a listener takes an active role in the communications process by using restatement and summary, and responding to nonverbal cues and feelings (Knippen & Green, 1994; Rogers, 1983). The effectiveness of such listening may exist independently of the practitioner identifying a witness's or suspect's PRS. Active listening has been shown to correlate strongly with social skills, including emotional sensitivity (Gearhart & Bodie, 2011), and facilitate therapist-client (e.g., Fitzgerald & Leuder, 2010), doctor-patient (e.g., Fassaert, van Dulmen, Schellevis, & Bensing, 2007), and sales person-buyer (e.g., Drollinger & Warrington, 2006) communications. Active listening also has been used to deal with volatile confrontations in police negotiations (Dolan & Fuselier, 1989; Noesner & Webster, 1997; Van Hasselt, Baker, Romano, Schlessinger, Zucker, Dragone, & Perera, 2006).

The second tenant of NLP is the presumed relationship between an individual's PRS, eye movements, and cognitive processing. In the 1960s and 1970s, eye movement research found that, while answering questions, people typically shifted their gaze away from the questioner. It was proposed that this was due to functional asymmetries in the two halves of the brain (Ehrlichman & Micic, 2012; Kinsbourne, 1972). Rightward shifts were thought to occur when a question elicited verbal thinking (e.g., word definitions), and leftward shifts to occur when a question involved visual imagery (e.g., describing what a specific item looks like). NLP practitioners drew on these findings and proposed that eye movements also provide insight into a subject's PRS and can be used to determine if their responses are constructed (i.e., deceptive) or recollected

(i.e., truthful) by observing gaze direction. For instance, if a subject with a visual PRS is fabricating images, he/she will look up and to the left. When visually remembering images, his/her eyes will shift up and to the right. On the other hand, someone with an auditory PRS who is constructing a response will maintain a level gaze toward the left. If the same person is remembering sounds or words, his/her gaze will be level and to the right (Dilts et al., 1980).

Multiple research studies have examined the relationship between eye movements and cognition that is assumed by the NLP model (Baddley & Predebon, 1991; Elich, Thompson, & Miller, 1985; Farmer, Rooney, & Cunningham, 1985; Poffel & Cross, 1985; Thomason, Arbuckle, & Cady, 1980; Wertheim, Habib, & Cumming, 1986), and have found no support for the claim that eye movements correspond to the sensory modality triggered by a question, or that there is a relationship between eye movements and deception. Eye movements are influenced by a number of factors, including emotion, culture, hand dominance, social interaction, and cognitive processing. American, English-speaking subjects tend to look to the left when they are asked emotional (Schwartz, Davidson, & Maer, 1975; Tucker, Roth, Arneson, & Buckingham, 1977), stressful (Tucker et al., 1977), or embarrassing (Libby & Yaklevich, 1973) questions. Eye movements while viewing faces (Blais, Jack, Scheepers, Fiset, & Caldara, 2008) and visual scenes (Chua, Boland, & Nisbett, 2005) vary as a function of country of origin (East Asian versus Western Caucasian). Right-handed (vs. left-handed) individuals tend to turn their heads and eyes to the right when solving verbal problems, and to the upper left when solving mathematical problems and visualizing familiar places (Kinsbourne, 1972). Eye movement during social interactions and social thoughts are driven by many influences, including distance between the interviewer and examinee (Argyle & Cook, 1976; Ehrlichman & Weinberger, 1978; Exline, 1971; Kendon, 1976). Wertheim, Habib, and Cumming (1986) reported that, although subjects looked upward when asked to recall visual information, eye movements for kinesthetic and visual recall were inconsistent. People are more likely to make no eye movements (i.e., they will stare) when answering visuospatial questions (Ehrlichman & Weinberger, 1978). Finally, the identification of a PRS through eye movements (or via self-report) is not supported by any empirical data (Sharpley, 1984), making the existence of a PRS highly suspect. For example, interviewing studies in which eye movements and verbal responses were simultaneously recorded demonstrate that eye movement does not correlate with word choice (Coe & Scharcoff, 1985; Gumm, Walker, & Day, 1982) or with deception (Mann et al., 2012; Wiseman, Watt, ten Brinke, Porter, Couper, & Rankin, 2012).

The third major NLP claim is that a practitioner can exact influence over a person by matching or mirroring the subject's PRS as it is manifest via non-verbal behaviors, aspects of speech, body posture, breathing, and blink rate (Heap, 2008). That matching and mirroring modulates communication has some empirical support (independently of whether these are engaged via a PRS). Multiple studies have found that deliberate, yet careful and limited, use of mimicry of verbal and nonverbal behaviors leads to more effective dialogue. Mimicry has been shown to strengthen the speaker's likability and their skill of smoothly communicating in certain situations (Chartrand & Bargh, 1999). For example, high verbal mimicry is associated with better outcomes for the mimicker in negotiation settings (Curhan & Pentland, 2007; Maddux, Mullen, & Galinsky, 2008). Also, mimicry may aid in developing and feeling empathy, in turn improving the understanding between communicators (Adelmann & Zajonc, 1989; Hatfield, Cacioppo, & Rapson, 1992; Izard, 1971; Stel, van Baaren, & Vonk, 2008; Tomkins, 1963). Finally, matching body language may lead to greater levels of interpersonal rapport (Charny, 1966; Dabbs, 1969; LaFrance & Broadbent, 1976).

Science-Based Methods

In summary, there is no clear empirical support for the basic tenants of NLP, that individuals deal with the world in terms of a PRS (i.e., the existence of a PRS), that a PRS is manifest in terms of preferred verbal predicates and eye movements, and that one can exert influence over another by matching/mirroring their PRS. Although the existence of a PRS is not empirically supported, the use of mirroring and matching in communication has substantial research to warrant its use. As such, it is possible for NLP practitioners to employ methods for which there is scientific support (via the use of active listening, mirroring and mimicry).

Additional examples may be found in studies of negotiation, and we summarize some of these briefly here because they illustrate additional, science-based matching-language tactics beyond those taught within the NLP framework. When people actively engage with each other during an interaction, they converge on how they perceive both the situation and potential solutions to an issue. This type of coordination, described as “Linguistic Style Matching (LSM),” (where “style” refers to the linguistic presentation of ideas and arguments; Niederhoffer & Pennebaker, 2002), leads to synchrony of word use and smoothness of interactions (Bernieri & Rosenthal, 1991; Jones, 1988; Putnam, Wilson, & Turner, 1990; Simons, 1993). When two people talk, they pattern and coordinate their verbal statements such that each individual’s cues and responses fit into a series of interconnected events (Auld & White, 1959; Putnam, 1985; Taylor & Thomas, 2008). Similarly, social distance in communication is reduced through adapting gestures, idioms, and behavioral strategies to be more similar to a conversational partner (Giles & Coupland, 1991). Since nonverbal mimicry can increase persuasiveness (Van Swol, 2003), matching nonverbal behaviors like facial expressions, kinetics, and proxemics maximizes the communication process (Ellis & Beattie, 1986).

Operational support for these findings comes from police negotiators engaging in LSM by embracing the same motivational focus as the hostage taker (Taylor, 2002a, 2002b; Taylor & Donald, 2004). When negotiators established high levels of affiliation and interdependence via “synchronized turn taking, mutual reciprocation of the other’s focus, and general verbal complementarity” (Donohue, 2001; Giebels & Taylor, 2009; Taylor and Thomas, 2008, p. 6), rapport and trust was more likely. Taylor and Thomas (2008) explored the dynamics of LSM by examining audio-taped interactions between police negotiators and nine actual hostage takers. The researchers were interested in the differences between successful and unsuccessful negotiations in terms of degree of LSM and turn-by-turn matching (versus verbal dominance) over both the entire negotiation and during the final stages of the interaction. They found that negotiators in successful interactions demonstrated significant turn-by-turn matching in their use of articles, prepositions, present-tense words, level of positive emotion, social concern, and exploration of the cause of the incident at a rate of almost 10 times that of the unsuccessful negotiators. These actions led the hostage takers to reciprocate the negotiators’ present-centered focus, discussion of social issues, and positive affects, as well as focus on problem solving through inclusion, insight, and causation. In addition, successful negotiations maintained consistent LSM over time.

Various explanations have been offered for the persistence of the NLP “model,” and its prevalence in practice and training despite decades of contrary science (Druckman & Swets, 1988; Heap, 2008; Vrij & Lochun, 1997). What we propose here is that the persistence can be understood, in part, by the fact that some components of NLP practice, although not originally proposed on the basis of science, reflect rigorous psychological theorizing and empirical data, and

are effective in various applications. Active listening and mimicry/mirroring aspects of NLP may be examples of such.

If this reasoning is sound, then it follows (i) that these components may be taught without reference to the underlying NLP model, for which there is scant evidence, and (ii) that systematic observations of police (and intelligence) interviews and interrogations may reveal other methods and techniques that, while not easily identified with any current scientific studies, would be useful starting points for such analyses. Two methods that have been shown to significantly improve witness and criminal interviews and interrogations, the Cognitive Interview (Fisher & Geiselman, 1992) and the Strategic Use of Evidence (Hartwig, Granhag, Strömwall, & Vrij, 2005) were initially formulated for analysis on the basis of independent, systematic observations of police in practice (described in Fisher, Geiselman, & Raymond, 1987), and Hartwig, Granhag, Strömwall, & Vrij, 2004, respectively).

Such science-practitioner partnerships can be of mutual use to both parties. Importantly for the practitioner, methods that are grounded in sound psychological theorizing are more likely to generalize across individuals and situations. In addition, research will help delineate the limits within which a particular method or technique may be useful. The effectiveness of mimicry is offered here as an example. The complexity of the use of mimicry was foreshadowed by an early NLP study on the effectiveness of NLP in persuading individuals to join a professional organization. The individuals were presented either with only general information on the organization (as a control condition), direct communication (containing general information and a suggestion to join the organization), or an indirect persuasive message about the organization (Dixon, Parr, Yarbrough, & Rathael, 1986). Indirect persuasion involved using NLP methods of metaphors and mirroring mood and demeanor. The authors found no significant differences in likelihood to join the organization among the three groups. However, contrary to the predictions of NLP, the direct message persuaded more individuals to take action than the indirect persuasive message.

Subsequent studies have shown that the use of intentional mimicry may backfire. If people become aware that they are being mimicked, it can be perceived as mockery and threaten rapport between the interactional partners (Lakin & Chartrand, 2003). Mimicking a subject also can affect how the practitioner judges a subject to be more or less trustworthy (Holton & Pyszczynski, 1989). Stel, van Dijk, and Oliver (2009) investigated whether one can understand what others are feeling when the mimicked expressions do not reflect the person's true emotions. They told target individuals to either lie or tell the truth and asked observers to either mimic or not mimic a target's facial and behavioral movements. Researchers later asked the same observers to determine the targets' credibility. The results indicated that non-mimickers were more accurate than mimickers in perceiving the targets' emotions and detecting truthfulness. This contradicts the notion that mimicry aids in the understanding of people's experienced emotions – mimicry may actually hinder the assessment of an individual's true sentiments and, in turn, inhibit detecting deception.

To further complicate matters, mimicry is not a tool that can be wielded with total control because it often occurs automatically and non-consciously. Unless trained otherwise, observing others leads to naturally and non-consciously mimicking of their behaviors, postures, gestures, mannerisms, words, accents, speech rates, tones of voice, speech rhythms, and facial expressions (Akehurst & Vrij, 1999; Bernieri, 1988; Bock, 1986, 1989; Cappella & Panalp, 1981; Chartrand & Bargh, 1999; Dimberg, 1982; Giles & Powesland, 1975; Levelt & Kelter, 1982; Neumann & Strack, 2000; Webb, 1969, 1972). The mere perception of emotionality in voice is sufficient for non-conscious mimicry to occur (Siegman & Reynolds, 1984), and behavioral matching may occur even when interacting with strangers (Bernieri, 1988; Dabbs, 1969).

Of particular relevance to police and intelligence interviewers and interrogators, if an interviewer believes the subject of the interview is not trustworthy and displays behaviors, feelings, and verbal styles that demonstrate distrust in the subject, the subject may non-consciously mimic the negative affect of the interviewer, resulting in behavioral confirmation (Snyder, Tanker, & Berscheid, 1977; Chen & Bargh, 1997; Word, Zanna, & Cooper, 1974) and possibly stereotyping. In turn, confirmation bias occurs when the interviewer uses personal opinion to interpret the subject's conduct as evidence of a lack of trustworthiness (Akehurst & Vrij, 1999). This cycle can continue and disrupt the development and/or maintenance of rapport.

In 1985, the Army Research Institute requested the National Research Council (NRC) of the National Academy of Sciences to assess several techniques designed to examine human performance (Druckman & Swets, 1988). The strategies under review, including NLP, were developed outside conventional behavioral science research and often claimed high effectiveness. A Committee was formed and their tasks involved evaluating the existing scientific evidence for each technique, as well as proposing general evaluation guidelines for technologies and their potential applications. After assessing NLP, the Committee concluded that there was little, if any evidence to support its central assumptions. In fact, they reported that NLP theories consisted of metaphors with "little impact or acceptance in the scientific literature" and "concatenated anecdotes and facts that lead to no particular conclusion" (p. 141-142). They found no proof showing that NLP is an effective social influencing strategy and no scientific support for a relationship between PRS and gaze direction, posture, tone, or language patterns. They also determined that not a single study had evaluated NLP's effectiveness as a model for expert performance. As to whether NLP really measured up to its claims, the Committee concluded that insufficient evidence existed (all evidence was either negative or neutral) to proclaim that it works (Druckman & Swets, 1988; Swets & Bjork, 1990).

In the end, the NRC Committee recommended that any new technique or method to be implemented by the Army must be evaluated using a scientifically sound procedure, supported "by adequate scientific evidence or compelling theoretical argument, or both" (p.17), compared to alternatives designed for similar purposes, and confirmed with successful field tests (Druckman & Swets, 1988; Swets & Bjork, 1990). We propose here to add a critical item to this list of recommendations, which is to begin via independent, systematic observations of current practices. This may not only engage the practitioner and increase the likelihood of the use of science-based methods, it should also provide insights and identify opportunities for research that will grow the science as well as inform the practice.

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